
UNDERSTANDING YOUR EMOTIONAL OR BEHAVIOURAL PROBLEM(S)

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Developing a Cognitive Formulation or Diagnosis

When people come to a clinical psychologist it is usually because they are experiencing too much negative emotion, often depression, anxiety, anger, or irritation; or because they have excessive levels of counterproductive behaviours. These are behaviours that are causing trouble in their lives or the lives of those around them, or which are preventing them from achieving their life goals of being successful in their careers and/or in their relationships. These counterproductive behaviours include such things as use of substances, cleaning or checking rituals, avoidance of some places or activities, and aggressive behaviour. Less frequently, people go to clinical psychologists to get help with developing new behaviours or improving their skills in some area, such as in relationships or social situations.

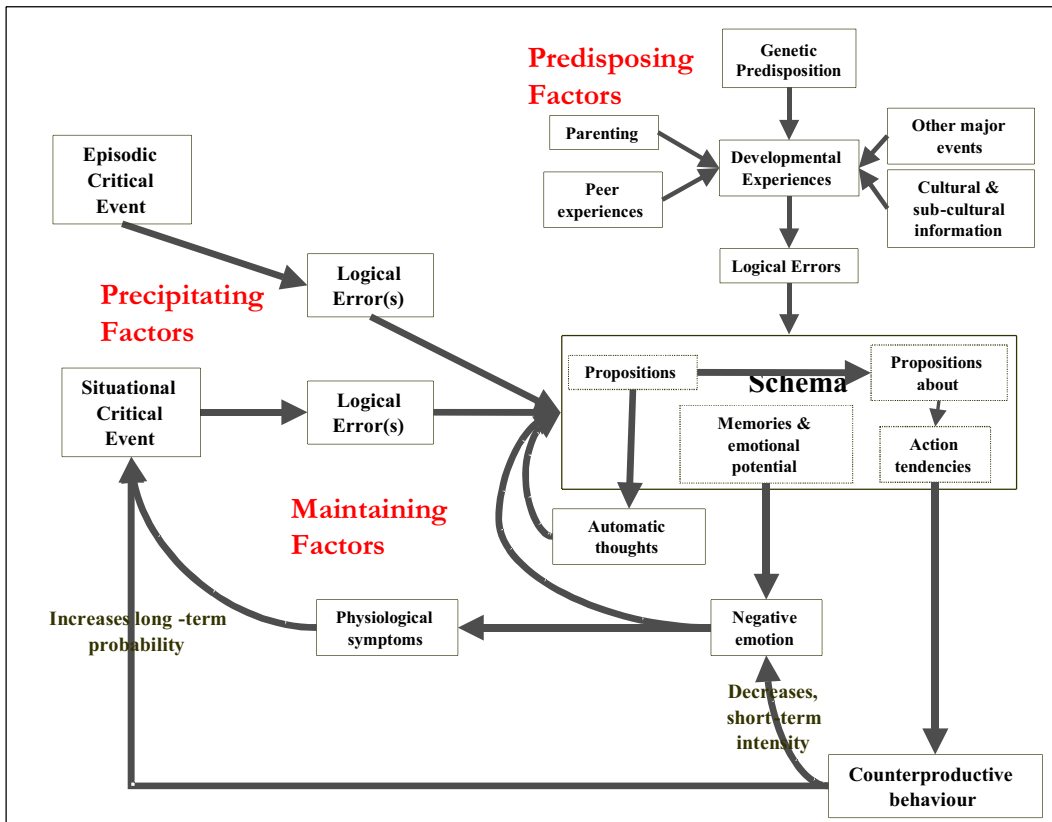
Clinical psychologists try to understand that excessive emotion or behaviour in terms of three major sets of factors external to the person, and some internal factors. The sets of external factors are: The events that led up to or set the stage for the behaviour or emotion (predisposing factors), the events that started this particular episode of the behaviour or negative emotion (precipitating factors), and the environmental and internal factors that keep the behaviour going (perpetuating or maintaining factors). You can see that these three factors can be represented by words all starting with “P” to make a useful mnemonic.

There are quite a number of theories in psychology, and different psychologists will align themselves with different theories. The major way in which theories differ from each other is in the *internal* structures and processes that cause people’s emotions and behaviour. Each theory proposes a different set of hypothetical constructs to explain the internal processes that lead to emotion and behaviour. In this document we are concerned with a combination of behavioural, cognitive and social learning theories. The combination used in this document would generally be known as “Cognitive-Behavioural” theory although it is important to note it is not the only configuration of theories that could be called cognitive-behavioural, nor is it the original meaning of the term as developed in the late 1970’s by a group of behavioural psychologists primarily at the University of California. The components of this particular configuration of theories are the three main learning theories of classical conditioning, operant conditioning, social cognitive (vicarious) learning, the cognitive theory of Aaron Beck, and the schema theory of Jeffrey Young.

In trying to understand the behaviour and emotions of people who come for help, clinical psychologists make use of their ideas of how emotion and behaviour develop and are

maintained, according to the particular theory they espouse, to develop a *diagnosis*. Another name for diagnosis is “formulation”, but while “diagnosis” has a meaning of finding a *label* for the condition, *formulation* has a meaning of *understanding* the condition. That means understanding the predisposing, precipitating, and perpetuating factors for the problem (another “P”!) behaviour or emotion, i.e. what causes what, and how it all fits together. In Cognitive Behaviour Therapy, of course, we are especially interested in the *cognitive* and *behavioural* factors that contribute to these processes, that is, our beliefs, thoughts, and thought processes. One way of making sense of all these factors is to combine them into a general model of how negative behaviour and emotion is acquired and maintained. A model is a little different to a theory. A good theory consists of a set of individual testable propositions. A model is a somewhat simplified overall idea of how all the bits of the theory apply in the particular phenomenon. It doesn’t necessarily go to a level of microscopic detail on why each piece works. In the same way, if we were trying to understand why a car is not running well we would have a model of how cars run in general and compare bits of our car to that model. We would not need to know the detail of the theory of internal combustion, we just need to know we need a spark, fuel mixture and a drive train. If it was not working we would compare what was observable with our model of the workings of the engine and our knowledge of the subsystems of the electrical sub-system, the fuel sub-system and the mechanical sub-system. Often theories are written in words, and models are drawn in diagrams, which reflects the difference, but it does not have to be so. Theories can often be drawn and models can be put into words, as I am about to!

Below is a model of emotion and behaviour that can be used in many conditions, thus it is “Generic”. You can see that it is divided into Predisposing factors, Precipitating factors and Perpetuating factors. The arrows indicate the direction of influence or cause and effect.



Predisposing Factors

Young's Dimensions of Temperament

Reactive ↔ Nonreactive
 Pessimistic ↔ Optimistic
 Anxious ↔ Calm
 Obsessive ↔ Distractible
 Accepting ↔ Aggressive
 Irritable ↔ Cheerful
 Shy ↔ Sociable

Genetic Predisposition

The first box is Genetic Predisposition. For a long time scientists have thought there are genetic predispositions for many disorders, but the genetic predispositions have been very difficult to identify with any certainty. Reasons include the difficulty of discriminating between innate behaviour, and behaviour that one has developed by observing one's parents or that has been shaped by one's early environment. Secondly, even though some emotional and

behavioural patterns do seem to run in families, it has not been possible to relate them to a single gene. As soon as more than one gene is involved, the situation becomes very complex and makes it even more difficult to tease out the relative roles of genetic variation and experience. With the development of human genetic mapping we may be on threshold of new discoveries in this area.

Psychologists over the years have observed patterns in the behaviour of individuals that seem to apply throughout their lives, from infancy to adulthood. They have concluded that these patterns are based on genetic factors and have named the configuration of these patterns "temperament". For example, as shown in the box, Young et al (Young 2003) have identified seven hypothesised dimensions of emotional temperament, that I have paraphrased slightly. A person is therefore born with a tendency to be more or less reactive, more optimistic, or more pessimistic and so on.

The "Big Five" Dimensions of Temperament

Openness to experience
 Imaginative & curious ↔ Shallow & imperceptive
Conscientiousness
 Organised & reliable ↔ Careless & negligent
Extraversion
 Active & talkative ↔ Passive & reserved
Agreeableness
 Trusting & kind ↔ Hostile & Selfish
Neuroticism
 Nervous & moody ↔ Calm & pleasant

Another common view of the dimensions of temperament is the "big five" of openness to experience, conscientiousness, extraversion, agreeableness, neuroticism, as shown in the box.

There are of course other important aspects of our genetic endowment, ranging from quite gross factors of chromosome configuration through to the many subtle genetic contributing factors to intelligence. Aspects of our physical makeup, such as hair colour, may also be

important. I have seen a number of people in my practice who had red hair and freckles as youngsters, and who report they were bullied and teased on account of these physical characteristics. Thus it is important to recognise that genetic factors may contribute even though we do not know how much, and to acknowledge that there may be some overall themes in a person's approach to the world, that we can describe in terms of the dimensions of temperament.

Developmental experiences

The next group of factors is *developmental experiences*. In this model there are four major sets of developmental experiences: parenting experiences, peer experiences, major life events, and cultural and subcultural information. The most significant developmental experiences are usually to do with parenting, and peer experiences, but occasionally there will be a significant other experiences. A major part of our learning during the development period is by operant conditioning. There are four processes in operant conditioning: positive reinforcement, negative reinforcement, punishment and response cost. The first two accelerate behaviour, and the second pair to decelerate behaviour. Also important are schedules of reinforcement. A behaviour can be rewarded frequently, or sporadically. Frequently rewarded behaviours are acquired quickly, but then decelerate quickly when the positive outcome stops, but sporadically rewarded behaviour persists long after the positive outcomes have ceased. Negative reinforcement is an important factor in maintaining the counterproductive behaviour and strategy of avoidance. With negative reinforcement the behaviour is reinforced because it leads to the cessation of distress. There are two counterproductive consequences of the logic of negative reinforcement. First, the avoidance means that the person never develops a tolerance for distress, nor experiences any long-term positive consequences. Second, if the distress was a relatively infrequent occurrence and the association of the avoidance with the cessation of distress was by chance, then the utility of that avoidance is unlikely to be tested.

Other aspects of operant conditioning that can affect the acquisition of counter productive behaviour are rewarding of successive approximations, and chaining of responses. Some theorists believe that deliberate self harm and is developed by increments, from picking at skin or stroking skin with sharp objects to a full blown ritual of cutting the skin, watching the blood flow and then bandaging the area. I have seen this sequence myself a number of times. It usually takes a third party to deliberately shape a counterproductive behaviour, but it is seen in individuals who have been groomed by a third party to abuse or commit violence on other people. Another example is drug users who deliberately lead associates to become heavier and heavier users of more and more addictive substances. Chaining also occurs in the use of substances (and in other counterproductive behaviours). The use of substances usually occurs at the end of a chain of behaviour that includes going to known dealer locations, picking the dealer, making the approach, and then going through the steps of ingesting the substance. People learn the chain as they develop the behaviour.

Parenting Style

One of the most important influences on our emotional and behavioural functioning is the style of parenting we experienced from our parents. Young identifies five kinds of Parenting style: Unpredictable/rejecting, Disempowering, Permissive, Conditional acceptance, Grim & perfectionistic. These are fairly self-explanatory. *Unpredictable/rejecting* parents may have been unpredictable because of mental illness, extreme personality disturbance, substance use, or extreme self-interest. In some cases extreme poverty or work commitments may have been sufficiently exhausting that the parent was stressed and unpredictable. *Rejecting* parents display or voice their rejection of the child in a multiplicity of ways. *Disempowering* parents don't allow children to solve their own problems. This may be because they think their children incompetent, or the parents may be self-sacrificial themselves and inclined to do everything for others. *Permissive* parents may be very indulgent of their children, not setting boundaries for them and responding indiscriminately to their demands. This may be because the child was a long time coming and very precious, or when the parent has few competing demands.

For example the child might be the only child of financially well-established parents. Parents who give *conditional* acceptance may be quite responsive and affectionate to their children, but this response is dependent on the child behaving in a certain way: doing well at school work, in the family business, on the sports field or performance stage, for example. Such affection and responsiveness is missing from *grim & perfectionistic* parents. Such parents are very perfectionistic themselves and recognition of the child is only when behaviour has been perfectly in line with parental expectations.

Parenting is usually achieved through operant conditioning: certain of our behaviours are rewarded, for example with praise or affection or attention, others will be punished. Sometimes these consequences will be haphazard and unplanned, but sometimes there is direct instruction with feedback. The overall configuration is what we call the parental style.

Another important aspect to our parent's influence is how they model dealing with difficult situations: do they deal with things by surrendering to them, avoiding them, or overcompensating for them, or did they deal with problems with behaviour that was rational and "just right? The first three of these are three different kinds of strategies that can be used to deal with life problems: surrender, avoidance, or overcompensation. *Surrender* is when the person behaves in accordance with their beliefs, *overcompensation* is when the person behaves in ways that are the opposite to their beliefs, and *avoidance* is when the person avoids situations that are relevant to their beliefs.

Sometimes parents really do fit these patterns. Sometimes parents really do think of their children very negatively. It also important to know that sometimes the child can make logical errors and conclude that love from their parents is contingent on success or something else when that is not true.

Critical Peer events

Parenting experiences are probably the most important in determining the schema content relevant to your emotional functioning, but sometimes peer events are important, such as ridicule, bullying, or rejection by peers at school. Friendship patterns in childhood may be important, and changes of school and associated difficulties in establishing new peer networks may also have long-term effects.

Other Critical events

Other events more rarely have an influence on our schema content and hence our emotional and behavioural functioning later in life. One-off experiences have to be very severe and traumatic to have a strong effect. Examples of such events include incidents in which the child or another person dies or is severely hurt, and incidents of rejection or abuse by highly valued other people. Major disasters such as war, flood and famine are infrequent, in this generation, but when they occur they have major consequences. Of course ongoing abuse or bullying or, either by peers or adults, can also have severe consequences.

Cultural and sub-cultural Information

Another major developmental factor from a cognitive viewpoint is the meanings that we receive from our culture or subculture. We are all part of cultures and subcultures. Our culture may be a national culture like French or it may be related to our ethnic origin, such as Han Chinese. Subcultures may relate to any group that we identify with or that has had an

influence on us. That could be as big as Melbourne working class, Goth, Punk, Christian Evangelical, or as small as our family of origin. The smallest subculture could be between two people, such as two siblings. Twins often develop their own subculture, which may have an impact on their later life.

All of these cultures and subcultures will have information and beliefs. Such information could be about the dangerousness of certain spiders, trustworthiness of members of other cultures, or the value of one gender compared to the other.

Logical Errors

As noted already, we learn from those experiences. We incorporate the information into our own beliefs and the behaviours we have learnt become our behaviours. However it is in the nature of human beings to make errors in this process. Human thinking appears to be inherently conservative. We have a tendency to make conclusions that would make us safe and preserve our tribe and therefore our species, but in doing so we make errors which are not so beneficial to modern human beings. Some writers in Cognitive Therapy call these “Cognitive Distortions”.

There are Four kinds of logical error: Catastrophisation, Personalisation, Inappropriate Abstraction and Arbitrary thinking. some of which have sub-types. *Catastrophisation* is when the person goes way beyond the facts in a negative way. One kind of catastrophisation is *More Dire Than Justified*, when a person concludes that something is much worse than it actually is. Another, *Unjustified Negative Prediction*, is thinking a thing is worse than it is, but in the future, that is, when a person predicts that something will turn out much worse than it is really likely to, or predicts an unlikely outcome over a likely one.

Personalisation is when a person applies events in the world inappropriately to themselves. There are two kinds of personalisation: taking excessive responsibility for the event or by making conclusions about what another person thinks of them without any real evidence. The latter is often called *mindreading*. *Invalid Allocation of Responsibility* can also be applied to another key person, when you give them too little or too much credit for some event that is important to you.

Inappropriate Abstraction is drawing an abstract conclusion that is false or inappropriate. There are two sub-types: Selective Abstraction and Overgeneralisation. *Selective Abstraction* is taking only part of the information available and making some conclusions from it. Sub-types are *Biased weighting*, in which the facts are weighted, and *Ignoring facts*, often known as *Denial*, in which the person ignores some of the facts. These usually result from the person’s interests or prejudices: they see what they want to see. These are types of logical error that can occur when a penalty is awarded in a sports match. The supporters will be biased towards their team as being wonderful sportspeople and the opposing team as a bunch of thugs. They can ignore the referee’s previous record of fairness. They will bias and weight the facts accordingly and so may make faulty conclusions about the referee’s decision. *Overgeneralisation* is similar. The person takes a minor example and concludes that it applies to all cases, such as concluding a referee is lousy on the basis of one or two decisions.

Other examples of selective abstraction are *Black and White thinking* in which the person makes definite, extreme conclusions even when the facts are inconclusive, and *False*

Absolutes when the person uses words such as “Always” and “Never” when they are not correct.

There are two kinds of *Arbitrary Thinking*, *Shoulds* and *Emotional reasoning*. *Shoulds*, is when a person uses arbitrary standards for their own or other people’s behaviour. Such standards are based on a moral position, but do not reflect any natural law that causes them to happen and are therefore as arbitrary as saying “The sky should be green because green is most people’s favourite colour. *Emotional Reasoning* is when a person makes a logical conclusion on the basis of their emotion... it feels good, so it must be good, for example.

Logical Errors made as a child

We are just as capable of making logical errors as children, perhaps even more so than as adults. One example is a child, say of six or seven, whose parents are going through a marriage break-up. It may that one partner has had an affair. Things are tense and the child eventually gets shouted at for some minor misdemeanour. A few days later one partner leaves. “It was my fault because I was bad”, the child thinks. That child has started to put incorrect negative content into her schema about herself. There are numerous other examples, sometimes quite unwittingly fostered by parents, and sometimes deliberately fostered. Some of the most tragic are children who have been told they were bad for reporting sexual abuse. More minor and more common, but still resulting in negative schema content are children who are told they are bad because they fail in schoolwork.

Schemas and Schema Content

Thus most¹ of our developmental experiences are processed are processed into schema content by us at the time they occur. That is they are incorporated² into the relevant schemas. Material relevant to ourselves is incorporated into our self schema, material relevant to tables is incorporated into our schema about tables, material relevant to justice is incorporated into our schema about justice.

Schemas are permanent reference information that is stored somewhere in your brain. You have a schema for everything: banal things like tables and chairs, abstract concepts, such as “justice”, and about yourself and the world in general.

Schemas consist of four components: propositions or beliefs, memories, associated emotional reactions, and action tendencies. The propositional aspects of schemas are such things as “a table is a platform that is kept of the ground by some means, that you can put things on.” In this way we can recognise types of tables we have not seen, and know what to do with them. The memories in our table schema are memories of tables we have known. We might have seen a card table some time in the past, and know that it has legs tucked away inside it that we can swing out so it serves the purpose of a table. Each memory in our schema has emotion associated with it, and some kind of mix of these is what we feel when the schema is activated. Strong emotional memories tend to dominate others. Negative

¹ There are some important exceptions. Some material is only partly processed and leads to some of the phenomena that occurs in Post Traumatic Stress Disorder, but will not be dealt with in this document

² One view of this is that content that is similar to the overall theme of a schema is *assimilated* into that schema, and content that is dissimilar causes the schema to *accommodate* to the new material.

emotion such as depression, anger and anxiety is associated with predominantly negative content in the relevant schemas.

It follows from this that the emotions we feel in the moment are not coming from the thing or situation we are apprehending at that moment, they are coming from past experience of similar things. There may be a long chain of associations that have led to this particular one. The chain of associations has occurred because of a basic process in human learning: classical conditioning. Classical conditioning is the association of physiological reaction with a class of events that it was not previously associated with. The prototype is the association of the salivation response of Pavlov's dogs with the sound of a bell that was rung at the same time as food was presented. Responses that are innately associated with classes of events (unconditioned responses) can be associated with successive other classes of events. Recent studies have shown that cognitive factors such as cultural and subcultural information can positively and negatively affect the development of associations. Of particular importance to this discussion is that *emotional responses* are conditionable. In our example emotional distress was conditioned to the family dinner table. It could be that the innate fear we all have of loud noises became associated with our father's anger, then to the dinner table.

Conditioned responses are drawn out on a moment-by-moment basis by the events around us. In real life they are subtle and subdued, but in an entertainment calculated to evoke them such as a movie, play, oration or TV advertisement, they may be quite intense from moment to moment. Thus the emotion we feel in a moment is the emotion associated with the class of events that is being evoked in the moment. In another example the failure of a friend to respond to our text message in 2008 evokes the sadness we felt when our girlfriend didn't write to us when she was away with her family when we were thirteen, and who knows what earlier experiences.

Stored in our schemas then, we have our memories, and the potential for them to be evoked and for the associated emotion to also be evoked. Unfortunately for many people that emotion is intense and unpleasant and leads them to counterproductive ways of trying to control it, as we have seen. There is also some evidence that in the normal course of events the emotion associated with memories is diminished over time, through a process known as emotional processing, but that does not happen for all people, nor automatically for all memories. This is a factor that seems to relate to why some people feel negative emotions more intensely and go to more extravagant lengths to control them. Some people may also have many more negative experiences in their early life, therefore much more negative emotion to be remembered, and for this and other reasons their negative schema content is more frequently activated.

The fact that the emotions we feel in the moment are not coming from the thing or situation we are apprehending at that moment has implications for our reaction... the likelihood that the table we have inherited will be associated with an older man shouting at us and belittling us is very slight, because he is long dead, but our memories prepare us for that.

Most of us do not have strong emotional memories associated with tables, but for a person who has memories of family fights and tension associated with the family dinner table, similar tables will evoke those memories and the subsequent emotion. For most of us the action tendency we have for a table is to put something on it, but for the person with negative memories and associated emotions their tendency could be to avoid tables. I do know of

people who have great difficulties sitting down to a meal with their family because of

Disconnection/rejection Abandonment/instability Mistrust/abuse Emotional deprivation Defectiveness/shame Social Isolation/alienation Impaired limits Entitlement Insufficient self-control Other directedness Subjugation Self sacrifice Approval seeking	Impaired Autonomy Dependence/ incompetence Vulnerability to danger Enmeshment/ undeveloped self Failure in achievement Over vigilance & Inhibition Unrelenting standards Punitiveness Overcontrol Vulnerability to error <i>Young's Early Maladaptive Schemas</i>
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associations of the dinner table with tension in their family of origin.

Of course it is quite unusual to have negative schema content about tables. Psychologists have discovered that the most common negative schema content is about

1. The value of ourself
2. The nature of our life/the world
3. The integrity/safety of ourselves
4. The value of others

Behavioural and emotional disturbances are associated with a predominance of negative content in these important schemas. A depressed person will usually have predominantly negative content in their self-schema about being *worthless*. This will include the proposition “I am worthless”, memories of past events in which that was the conclusion reached (rightly or wrongly), associated emotion, and an action tendency to withdraw and perhaps ruminate. Young has gone further than this short-list and identified 17 different “Early Maladaptive Schemas” (EMSs) in five clusters: Disconnection/rejection, Impaired Autonomy, Impaired Limits, Other Directedness, and Overvigilance and Inhibition. *Disconnection/rejection* refers to people who feel disconnected to other people, or alone. *Impaired Autonomy* has the theme of inability to deal effectively with the world on one’s own. The person with *Impaired Limits* EMS is expecting more from the world than the world usually provides and that less input from themselves is needed to achieve goals. *Other Directedness* is about having others’ goals overshadow one’s own benefit. *Overvigilance and Inhibition* has the theme that things will get out of control unless (excessively) controlled by oneself.

To summarise so far: our developmental experiences are interpreted by us, and the results are stored as schema content for future dealings with the world. We may accept false information we are given such as “I’m stupid”, “I’m a waste of space”, “I’m a dirty little slut”. Or we may conclude false information for ourselves: “I made Daddy leave so I’m a bad boy”. Some psychologists have recognized themes in the schema content that are associated with emotional, behavioural, and personality dysfunction.

The fourth component of schema content is the action tendency. Even the most banal of schemas have action tendencies. The action tendency in our ice-cream schema is to lick, in our table schema to put things on one, and in our shark schema to get out of the water fast. Action tendencies can be functional to varying degrees. Licking, putting on, and leaving the water are probably all functional in most circumstances when the schemas mentioned are evoked. Running away from a harmless green frog is probably not, but that action tendency might be the basis of a phobia. Action tendencies are learnt primarily through the processes of operant conditioning and social cognitive learning. Actions

A special kind of schema content is propositions about the action tendency. This might include the proposition that rumination is a good idea, or that alcohol will solve all one's problems, or that it is best to lay low when people around are in conflict. Other kinds of content are *ultimate propositions* and *contributory propositions*. Judith Beck calls these *core beliefs* and *intermediate beliefs*. Core or ultimate beliefs usually relate to the crucial topics noted above: oneself, others, one's social world, the physical world, the future. Intermediate beliefs are about less central things such as "I am a bad parent", "I am an incompetent therapist". Intermediate beliefs may include *conditional beliefs* such as "If I am a bad parent I am a worthless person". Judith Beck says that intermediate beliefs may be attitudes, rules, or assumptions. She gives "It's terrible to be incompetent" as an example of an attitude, "I must work as hard as I can all the time" as an example of a rule, and "If I work as hard as I can I may be able to do some things other people can do easily" as an example of an assumption. (J.S. Beck, 1995 p16)

Schemas, as described here, provide the link between the person's past and how they react in the now. The content and configuration of schemas can be quite varied. An important part of therapy that goes at all beyond the surface is identifying the maladaptive schema content, choosing what to change, and changing it.

Precipitating Factors

That wraps up discussion of predisposing factors. You can see that the results of all the predisposing factors are sitting in the schemas waiting to be activated. They are activated by critical events or triggers. The model distinguishes between *episodic* critical events and *situational* critical events. Some emotional and behavioural problems are episodic: there are periods of time when the person doesn't experience the emotional distress and/or doesn't engage in the counter-productive behaviour. For example a person could be relatively free of obsessive compulsive symptoms until encountering a dead possum in their roof (the episodic critical event). After that it may be touching of food that triggers a cleaning ritual (the situational critical event). For the person who experienced conflict around the family dinner table there might be a period of no symptoms, until he inherits the very dinner table around which the fights occurred.

Critical events are usually external to the person, and may be of many kinds: an interpersonal event such as not being invited to a party, or conflict with an authority figure, or they might be achievement related events, such as making an error in an activity, or missing out on a promotion. Or they could be more environmental events such as a natural disaster, or encountering a situation or object that has especial relevance because of past experiences, such as a helicopter for a Vietnam veteran. Occasionally they will be internal events such as experiencing sudden chest pain. For the person who inherited the family dinner table, a

situational critical event would be sitting down to dinner with their own family. Sometimes critical events are not specific events, but are a change in environment, such as changing a workplace, that may have many nebulous factors that interact with predisposing factors to produce stress and counterproductive behaviour.

Any of these kinds of critical events may be interpreted by the person, logical processes applied and the relevant schema activated. There is the possibility of logical errors. The person with chest pain who has spent all day in unaccustomed physical activity in a tight might think, “I’ve got angina”, which is an unjustified negative prediction under the circumstances.

It follows from the discussion of predisposing factors that different people will respond to different events differently, depending on the material in their schemas and the logical errors they make in the moment.

Maintaining (Perpetuating) Factors

The important thing about maintaining factors is that they are all vicious cycles. That is they are processes that end up making things worse: the person suffers more pain or distress, or is less functional, as a result of the process. The model has three different vicious cycles: a cognitive cycle, a physiological cycle and a behavioural cycle.

The Cognitive Vicious Cycle (Automatic thoughts)

The cognitive vicious cycle is based on automatic thoughts. These are events that occur in the person’s stream of consciousness. Automatic thoughts are echoes or remnants of other cognitive processes, including logical processes, as we have been discussing. They are short and specific, and may consist of just a few words or a phrase. They may even be images, including visual, auditory, and kinaesthetic images. Or they may be *memories* in any of these forms. An automatic thought usually reflects a *belief*. A belief is a *proposition* in that it states what is considered to be a fact or a conclusion. It can be specific “That wasn’t a foul”, or general: “That referee is biased”; “That referee should be destroyed”. Automatic Thoughts are a kind of shorthand for the belief, they are generated by the schema. The vicious cycle part is that they serve to keep the schema active, meaning that the negative emotion and the counter-productive action tendencies are also active and doing their worst.

The Physiological Vicious Cycle

Physiological changes are part of emotions. When we become anxious, there are numerous effects of autonomic nervous system arousal, including rapid heartbeat, and fast shallow breathing. Both of these and their consequences can then become critical events. For people with Panic Disorder the physiological responses are interpreted (by unjustified negative prediction) as a sign that they are going crazy or dying. This makes them even more anxious, leading to further increase in experienced symptoms, leading to more negative thinking and so the vicious cycle continues.

The behavioural vicious cycle

There are many different kinds of counterproductive behaviour. They may be action tendencies that are associated with a particular schema or set of schema content. They mostly have the aim of reducing emotional distress, and many of them do in the short terms. The

vicious cycle part is that if they are counterproductive they result in more likelihood of emotional distress in the longer term. For example a depressed person has disappointing social experiences. He becomes depressed and activates the action tendency to withdraw socially which leads to fewer socially experiences and maintains the depression. A person with panic disorders monitors their heart rate more closely, thereby noticing more the moment-to-moment fluctuations and becoming more anxious. Many of the substances people use to reduce emotional distress have a counterproductive effect in that as the level of the drug drops in their system the person feels more intense emotional distress, perhaps even than they started with, leading them to seek more of the substance.

These are just some of the many, varied, sometimes gross, sometimes subtle counterproductive behaviours people may display. When it gets complicated is when an action tendency is counterproductive, and is associated with either a whole class of situations, or is the person's main way of dealing with the main situations they encounter in their lives. Then an action tendency becomes a *strategy*. The kind of strategies that are associated with emotional, behavioural and personality disorders are usually to prevent emotional pain and are usually counterproductive in that whilst they might work in the short term they set up tensions that in themselves cause distress, or they have negative long-term consequences. Jeffrey Young lists three main kinds of strategies: Compensatory strategies, Maintaining strategies, and Avoiding strategies. *Compensatory strategies* compensate for negative schema content. The person who thinks of themselves as worthless may develop a self-sacrificing strategy in which they attempt to cater for others needs in order to allow themselves to think of themselves as less worthless. The strategy is counter-productive because it doesn't ever totally deal with the worthlessness and associated negative emotion, because there is a bottomless pit of need out there, and because there will eventually be a tension when the person realises that their own needs and desires are not being met and becomes resentful.

Surrender strategies are when the strategy is consistent with the core proposition of your schema content. For example a person who believes they are of no value may be very sexually promiscuous, or live in squalor. *Overcompensation* strategies involve a lot of use of energy in activities that are inconsistent with the core proposition of your schema content. A person who believes they are of no value may be very sexually prudish, may have an excessively tidy house. *Avoidance* strategies are when the person uses energy to *avoid* situations that may trigger the schema content. A person who believes they are unlovable will not put themselves in situations where they might form relationships, be rejected and thereby activate their schema.

Operant conditioning is also important an aspect of maintenance. Counterproductive behaviours are sometimes maintained because they are positively and negatively reinforced or have been, or because alternative behaviours have been eradicated by punishment or response cost, or because they are part of a chain that is rewarded at least sometimes. Important maintenance aspects of chains of behaviour are:

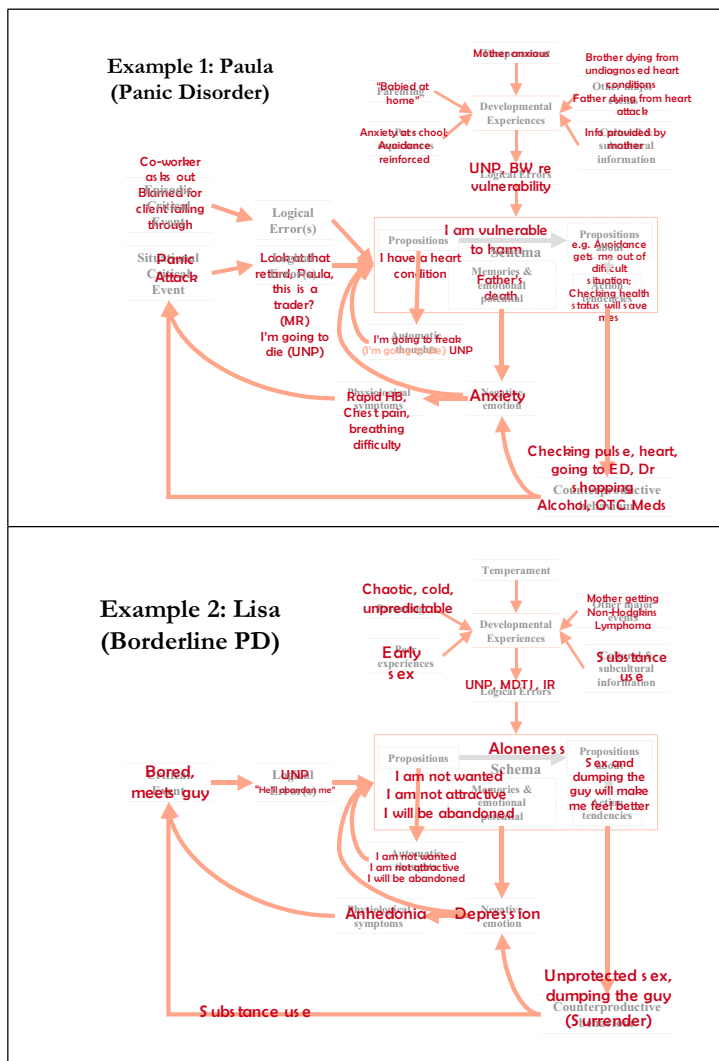
1. Encountering a step in the chain activates an action tendency to go to the next step
2. The strength of the action tendency to the next step in the chain gets stronger the closer one is to the reward
3. Prevention of completing a step, of a chain, leads to anxiety

Overview

Emotional distress and counterproductive behaviour are caused by many different factors and are themselves maintaining factors for themselves. Reducing them can be complicated and arduous. It can also be seen that there are many different places the process that the cognitive therapist can intervene. Traditional cognitive therapy involves starting with the automatic thoughts and logical errors and reducing them before working on modifying schema content. Other important areas to intervene are:

- The belief in the efficacy or desirability of the counterproductive behaviour
- Decelerating the counterproductive behaviour itself
- Finding and accelerating an alternative productive behaviour
- Reversing the logical errors made in forming the schema content in childhood
- Developing tolerance for emotional distress
- Changing memories to be more true
- Developing allegiance to a new subculture.

As an adjunct under appropriate management, psychoactive medications can be used to modify the emotional experience over the short term.



The process of cognitive therapy is a metacognitive process, meaning thinking about thinking. You observe your thinking and identify the problem aspects of it whether they may be the automatic thoughts, the logical processes, or the schema content. One way of doing this is by using the model presented, and plugging in information about the person to the model. The boxes show two examples of this: one a person suffering from panic disorder and the other one a person with Borderline Personality disorder. Once the formulation has been according to this or some other model made, then we apply various techniques under the control of conscious will to change those aspects of thinking and eventually behaviour, or occasionally we may wish to change the environment.