

Fear of losing control and develop insanity

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A brief description of the psychology, physiology and treatment of anxiety

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Misinterpretations of the body's normal reactions to danger

Most people suffering from anxiety disorders and OCD (compulsive ideas and compulsive behaviour) are afraid of losing control. Such thoughts for instance occur because, during an anxiety attack, the patients feel incapable of controlling their phobic symptoms. These symptoms may be natural and automatic bodily reactions, such as e.g. palpitation, dizziness, trembling, nervous stomach, sweaty palms, dry mouth, a sense of non-reality, breathing difficulties, etc. – also referred to as **autonomous symptoms** (autonomous means independent of the mastery of one's volition).

A natural response for a person experiencing such symptoms is to believe (i.e. misinterpret) that the inability to control such symptoms also means the inability to control oneself – and next, the person will become afraid of entirely losing control. Such misinterpretation may further cause the person to believe that he/she is probably going to faint, becoming insane or perhaps even dying.

This is not true, however. In fact, it is just the other way around as, in reality, these symptoms indicate that the body is reacting in an absolutely normal, healthy, sound, and proper way and is, moreover, in total control.

Real and imaginary danger

If one is in a real and dangerous situation, there is a cerebral centre, called the **amygdala**, that will respond to threats and, via nerves to various organs of the body, make it set for action – be this fight or flight or freezing, in order that one is behaviourally prepared to face the danger. The adrenal medulla will then secrete adrenaline and noradrenaline which, again will affect many of the same organs and much of the same tissue. When adrenaline establishes contact with receptors of the various organs, these are programmed to react in a predefined way to prepare them for better coping with a dangerous situation, which will then increase survival. Likewise, the amygdala will affect the release of a pituitary gland hormone that, via the bloodstream, will stimulate the adrenal cortex to release cortisone that also affects the body and the brain, enabling them to be prepared for responding to danger and stress.

Thus, the adrenaline's impact on the various organs is clearly targeted at survival in a *genuinely* dangerous situation. However, should the amygdala misinterpret a situation as dangerous, even though this is not the case, it will still initiate the production of adrenaline. If a person is not really aware of this, the body's reactions may seem incomprehensible and be interpreted as dangerous. In order that a person does not take fright from the bodily reactions that are present during an anxiety attack, it is thus important to understand the natural bodily reactions to adrenaline and, in general, the amygdala's capacity for putting the body into a state of threat alert.

The body's reaction to adrenaline

The **heart** will react by strongly intensified palpitation when affected by adrenaline. The purpose of this is to cause an increase in pulse and blood pressure as, then, one will be better prepared for surviving *genuine* danger.

The explanation is that the palpitation (and hence increased pulse and blood pressure) put us in a far better position for fleeing or fighting, if we are e.g. chased by a dangerous animal. Increased pulse and blood pressure will pump extra blood into the large groups of muscles so that they can better contribute to leading us out of danger. This is termed *adaptive avoidance coping*. When the blood is concentrating on the large groups of muscles, the blood supply to the small muscles will decrease, which is why one may experience shaking of hands at the cost of the fine motor skills as such skills are not important for fleeing.

The heart pumping more blood to the brain and our increased blood pressure also mean that we will *not faint* which would be particularly inexpedient in a genuinely dangerous situation since, in that case, the dangerous animal would soon be able to catch up with us. Thus, our reaction to adrenaline has been contributory to secure the survival of the species and constitutes an important element in the evolution. There is one exception where a person may faint from anxiety, though, and this is blood phobia. This is not dangerous, however. Seen from an evolutionary perspective, the advantage is that if one is in danger of bleeding to death, the blood pressure will be lower if one lies down, which will minimise blood loss. One can also faint if one is hyperventilating, albeit this is not from anxiety but because our body is losing too much carbon dioxide, and this will affect the acidity (pH-value) of the blood. The body will thus be healing itself by fainting because, then, breathing will briefly be discontinued, the carbon dioxide will again accumulate and be normalised, whereupon one will soon wake up. Hyperventilation is something we can learn to control.

Anxious people are frequently aware that their heart makes an additional beat (extrasystoles) or that it skips a beat, followed by a small pause, which is often misinterpreted as imminent cardiac arrest, or that one has a heart failure. Additional beats are, however, quite normal and must occur – also in cases without anxiety. Rapid heart beating is frequently misinterpreted as a sign of thrombosis or a heart attack because one believes the heart to be incapable of withstanding such rapid rhythm. Were this the case, we would not be able to exercise, during which we will frequently push our pulse upwards. The heart will not beat any differently during exercise than during panic attacks and, hence, it is perfectly capable of withstanding rapid beating. And it will only do our hearts good to be activated since, actually, this will prevent arteriosclerosis and coronaries.

The **muscles** will be filled with maximum amounts of blood in order that they can contribute to bringing the person away from danger or to put up resistance. Anxious people will often experience this as stiff and tense muscles.

The **lungs'** function is that of oxidising the blood. During an anxiety attack one's breathing will be more rapid as the body is preparing for a need for increased energy in connection with a possible danger. At the same time, the breathing centre in the brain stem will give a signal for slower breathing as we will be breathing too rapidly – thereby there will be a dis-

placement of carbon dioxide in the bloodstream. Anxious persons will experience these contradictory signals as a weight on the chest and oxygen deprivation, and one becomes scared of not being able to breathe. During an anxiety attack, one will also be flexing one's muscles and, likewise, the diaphragm muscle – with the latter constituting an impeding factor on our deep breathing. Once again, this is a matter of our body's automatic and natural response – and no one has ever suffocated from an anxiety attack.

The **eyes** also react expediently upon being affected by the anxiety hormone, adrenaline. Our pupils will widen, providing maximum visual power, if one is to flee or fight, but – at the same time – it will become more difficult to focus on things that are close, which may appear frightening. This may be experienced as visual disturbances.

The **nostrils**. There will be nasal flaring in order that one will be better enabled to breathe.

Dryness of the **mucous membranes** will occur as it is important to retain water in the body.

Mouth and throat will also dry out in order to retain water in the body, and the production of saliva will cease. This is why, during anxiety, many people will experience an unpleasant mouth dryness accompanied by swallowing difficulties – or maybe even a lump in their throat. Thus, the body will discontinue its digestive processes, as the energy will instead be directed towards getting away from the danger.

The **bowel activity** will be affected – both suppressing and stimulating in various places of the digestive tract. This may give rise to stomach pain and nervous stomach – perhaps with nausea and, frequently, fear of vomiting. Vomiting is not linked with anxiety, however, as this would be inexpedient in the event of one having to flee from a dangerous animal.

The sphincter muscle will relax as it is practical to get rid of excessive weight if one is to flee. This is why, during an anxiety attack, many people experience an urge to pass water or defaecate and, hence, will frequently have familiarised themselves with all nearby restrooms.

The **kidneys'** urinary output will decrease as it is important to retain water in the body.

The **liver** will release considerable amounts of sugar to the blood in order that the muscles may absorb this for energy production in their preparation for fight or flight. The sugar will affect a displacement of the osmotic pressure which, again, will change the fluid balance in what is referred to as the blood brain barrier (BBB). This will cause the person to experience a feeling of unreality or dizziness – a feeling with which the anxiety patient is familiar – and by many interpreted as a sign that they are probably becoming insane, despite the absolute benignity of the state.

The **skin** is also affected by adrenaline. The outermost blood vessels will be constricted – for the purposes of concentrating the blood in the large groups of muscles as well as preventing major blood loss, should one be wounded in battle. **Perspiration** will increase in order to cool off the body before a potentially dangerous fight or flight. This will frequently be experienced as cold and clammy skin and, similarly, there may be an alternating sensation of being hot and cold, of feeling feverish and shivering.

The **genital organs** in men will be protected by the testicles being drawn up in order to

secure reproduction. As a reaction in what is referred to as the sympathetic and parasympathetic autonomic nervous system, some men may experience erection during an anxiety attack.

Misinterpretation of bodily reactions

Danger may be registered by two brain systems: the conscious and the subconscious. What is experienced as danger will not always be genuine danger, however; and the difference between the person experiencing genuine danger and the person experiencing anxiety without being in danger is that *misconception* has taken place.

The brain's threat systems via amygdala, the *subconscious part*, will then for instance cause the initiation of adrenaline production (which must take place in the event of a person's exposure to danger), affecting the various organs though there is no real danger.

When an anxious person is not in any actual danger, all symptoms (palpitation, sweat, trembling, dizziness, breathing difficulty, a sense of unreality, etc.) will then be experienced as incomprehensible and frightening – *the conscious part*. It becomes easy to believe and misinterpret that something must be wrong with one's body, or that the body is out of control. This is one of the reasons why the anxious persons will experience that they have lost control of themselves and their bodies.

Whereas the truth is that this is what it *feels* like, albeit not being an actual fact.

It may be true that a person has no direct control of e.g. heart pounding or sweaty palms, but this is equally true when there is no anxiety – in this case one simply does not notice this and, hence, does not attribute any significance thereto. When one is anxious, one will have precisely as much or as little control of oneself as when one is not anxious – though one is very focused on one's symptoms and convinced that something is wrong with one's body and that one is losing control – and this will just cause one to be even more frightened. The symptoms become even more forceful because, now, even more adrenaline will be produced, which will again reinforce the many bodily symptoms, and thus create a vicious circle.

To the anxious person, the body's symptoms will thus very easily become an unreal proof that one is losing control – that one is probably losing one's mind.

Also, the misconceived interpretation of symptoms and experiences will frequently cause a person to become anxious about the anxiety – also referred to as **meta anxiety**.

Thoughts and emotions

Thoughts and emotions are interrelated and constantly exert a mutual impact on one another. An emotion will immediately mirror our thoughts. Hence, if we misinterpret something (e.g. think that we are now losing control or becoming insane), this feeling will not "know" that this is wrong, since we do indeed believe it to be true, and we will therefore experience anxiety. Anxiety regulation will typically take place by reaching safety and escaping the danger, but if – in actual fact – we are not exposed to any danger and, since we

cannot flee from ourselves and, at the same time, believe our body to react in an uncontrollable way, we will just become increasingly anxious: the inexpedient circle of anxiety has taken effect.

Negative automatic thoughts

How can sudden anxiety occur in case one is in no real danger?

A misconceived feeling of anxiety may occur in a split second. It can take place in 1000 of ways, but it might e.g. be a situation after having run to catch a bus and, therefore, the heart will be pounding. At the same time, one may be a bit stressed and unable to find the money for the ticket. In such a case, the thought may occur: *"Oh, now everybody will notice me and think that I'm the one causing their delay"; "My heart is pounding, could something be wrong?"; "I can't get out, I'm stuck – maybe I'll faint"*. Such thoughts are referred to as **negative automatic thoughts** as they will occur automatically in situations like this, without any rational justification for such thoughts. Basically, they will frequently occur on the basis of low self-esteem, and they will rapidly become self-corroborating – albeit being misinterpretations. And, as emotions react to what we think, we will come to experience discomfort and anxiety. The negative automatic thoughts are coloured and distorted by emotions, which is why they may also be called automatic emotional thoughts – contrary to our rational and sensible thinking where we are aware that it is allowed to search for money on the bus and, also, that we shall not submit to what any other passengers might think.

In this situation, the subconscious threat centre, amygdala, will also learn to link bus with danger even though there is no real danger. The centre will then initiate the production of adrenaline and all the autonomous bodily symptoms will kick in – such as e.g. heart palpitation, sweating, trembling, etc. – and one will experience one's first actual anxiety attack. The conscious part of our brain may now begin to interpret the situation on the bus as well as the bodily signals by way of negative automatic thoughts or emotional thoughts, and this chaos of bodily reactions, thoughts, and emotions will evolve into a panic-related anxiety attack resulting in one's fear of ever riding on a bus again – as you might risk to experience the same all over again. Frequently, this will also spread to other situations involving trains, planes, lifts, cinemas, motorways, bridges, etc. – and particularly in situations in which it is impossible to get away for the purpose of regulating one's anxiety through evasive behaviour.

Anatomically, the amygdala threat system is located in an entirely different place in our brain than our mental activity (our cognitions) and, subconsciously, programmed to register and react on what it detects as representing a danger to us. When we become conscious about the initiation of these systems – as our body is put on the alert via adrenaline and autonomous reactions in spite of the fact that we are not facing any danger, we will misinterpret this by way of negative automatic thinking; and as emotions react on what we believe, we will experience anxiety. This anxiety will then again affect the negative automatic thoughts, and the whole thing becomes self-corroborating.

The subconscious threat systems will also react on what we are dreaming and, thus, we may wake up bathed in sweat although what we have dreamed need not be true, indeed not even necessarily possible. The problem is, though, that when dreaming, we believe

what we dream, and hence amygdala will react as were it a real situation and again put the body into a state of alert. The amygdala's threat system is good at "remembering" and will therefore react in the same way in similar future situations and thus retain our defence reactions, negative automatic thoughts and feelings of anxiety.

Control and insanity

Our misinterpretations by way of negative automatic thoughts will retain the vicious circle. On the basis of one misinterpretation we have taught ourselves to become frightened of our own natural bodily symptoms, even though in reality they are healthy and vital signals that will secure our survival in a genuinely dangerous situation.

The naturally occurring bodily symptoms of anxiety may initiate new misinterpretations ("negative automatic thoughts"), such as e.g.: *"My body is running completely wild, I must be losing control and developing insanity"*, though the body is simply doing what it is supposed to, namely preparing for the ability to escape a genuine danger. This misinterpretation leads to further reinforcement of the anxiety and the establishment of faulty linkages between objects and situations that are not dangerous.

In reality, one is not losing control, it just *feels* like it. The body, on the contrary, is in complete control with respect to coping with potential danger. Even in people suffering from blood phobia, the body is capable of performing "self-diagnosis" as to the anxiety type from which one is suffering and then adapt the blood pressure accordingly.

Many people experience not being capable of rational thinking during anxiety attacks, but even this represents a kind of cerebral control, as the objective is simply to get away without being philosophical about the danger. No one has ever developed insanity from anxiety. However, an insane (psychotic) person may obviously also suffer from anxiety.

Actual loss of control is primarily seen in connection with psychoses, and panic anxiety is not a state of psychosis – it is a misinterpretation of negative automatic thoughts and signals from the body. Likewise, a person is in no greater risk of becoming psychotic because this person has suffered from anxiety or obsessive thoughts. These disorders are as allied as e.g. a cold and a broken leg. Being insane or psychotic involves hallucinating (typically hearing voices that one believes to be real although they are imaginary), delusional behaviour (one e.g. believes that one is able to fly or walk on water), no disease understanding, but, rather, believing oneself to be normal and healthy – which stands in glaring contrast to a person suffering from panic anxiety, who will often feel sick from anxiety.

Consequences of misinterpretations

People with a panic anxiety disorder, generalised anxiety disorder, health anxiety, OCD, or social phobia will experience many misinterpretations that contribute to retain anxiety. An example: A person with panic anxiety climbs the stairs or runs after the bus, and his pulse quickens. This person will now think that, since his heart is beating faster, this is a sign of an approaching anxiety attack (as, previously, he has experienced his heart to beat faster when he is anxious). In actual fact this is nothing but a natural reaction to physical activity,

but because he has developed the idea that palpitation equals anxiety (a negative automatic thought), he will thus mistakenly link palpitation owing to physical activity with the palpitation related to an anxiety attack, and he experiences the same feeling. Hence, he will now be at risk of avoiding all physical activity in the future, as he in fact believes this to be the same as anxiety (a negative automatic thought). Thus, emotions constitute a conscious experience of a situation which, for instance, consists of bodily sensations and thoughts. However, this will thus be a specific emotional experience of a situation that, among other things, consists of bodily sensations and thoughts, and it is not a specific innate emotional cerebral centre that will be activated in relevant situations.

Thus, the misconceived anxiety will also entail that one will commence to evade harmless situations, because – by and large – evasive behaviour and anxiety will always be linked. This is owing to the fact that when we evade danger, the threatening object will be subdued or disappear whereby the autonomous symptoms will cease, which we will register as a relief and an alleviation of anxiety. The argument that what we attempt to evade in case of genuine danger is primarily our own symptoms and reactions and, secondarily, the genuine danger does contain a certain element of truth. With the exception of evasive behaviour, in particular in connection with genuine danger, other behavioural strategies comprise paralysis/freezing or decidedly defending oneself and putting up resistance.

If we did not have the ability to register threats, we would overlook and ignore many dangers and, therefore, constantly be in mortal danger. This is why it is difficult to go against our body's threat reactions and anxiety, even when intellectually, rationally and logically we have realised that this is a misconceived feeling of anxiety on the basis of a false situation of danger. If we were not capable of reacting through autonomous symptoms, we would roughly be in the same kind of danger as a person who has lost his tactile sense and, hence, is unable to register pain.

The cost related to the evasion of misinterpreted danger on the basis of e.g. negative automatic thoughts is that

- 1) it will be problem maintaining
- 2) it will often be problem aggravating
- 3) when we persistently evade the harmless, we will never learn that it is in actual fact harmless and, consequently, this will retain our misinterpretations (negative automatic thoughts) to the effect that it is dangerous

Shaking off the anxiety

Fortunately, there are fine opportunities for shaking off the anxiety, even though it will usually take longer time to unlearn one's misinterpretations as compared with the time it took to learn them. Through cognitive therapy, it is relatively easy to rationally realise that the misinterpreted negative automatic thoughts are faulty (cognitive restructuring) and that there is no genuine danger. The hardest thing to learn is to avoid becoming anxious on account of the body's autonomous symptoms having been initiated because of the subconscious cerebral threat systems that, in spite our conscious understanding, will still have to learn that there is no danger and, hence, will continue to react as were it a dangerous situation. The reason why this is so difficult shall be found in our brain and its development.

The brain, the thoughts and the emotions

The oldest layer of the brain (the brain stem) or – in popular terms – "the reptilian brain", which is, however, misleading, as it also shares common traits with amphibians and fish. It controls basic functions such as respiration, blood pressure, waking state, heart frequency, etc. These reflexes are autonomous, i.e. independent of the mastery of one's volition such as previously described.

The next layer of the brain (the limbic system) which has mistakenly been called "the mammal brain" or the emotional brain, as its reactions may be comparable to emotional expressions. In these parts the organism's threat reactions (amygdala) and our state of activity, defence responses, flight and evasive behaviour, aggression and instinctive behaviour, learning and memory, but also the regulation of body temperature, the body's salt and sugar levels, hunger, sexual stimulation and erection.

The final layer, the cerebral cortex – frequently also mistakenly described as "the new mammal brain". But the various layers are not added as layers upon each other, and areas can be traced that are also present in by far the majority of vertebrate such as fish and mammals. A bit simplified, it can be said that the frontal lobe (prefrontal cortex) integrates various cerebral centres and networks into conscious thoughts and self-consciousness. This is where the most significant development has taken place in the evolution from chimpanzee to human.

The amygdala can learn to link or connect a situation with danger and then initiate the body's autonomous reactions. However, the amygdala also possesses innate dispositions according to which it will automatically and subconsciously react. For instance, trials with rats have shown that the smell of certain animals that are dangerous to the rat may automatically enable the triggering of the amygdala's activation of autonomous responses, whereas other "harmless smells" will not. It has also been shown that, by and large, we can learn to develop fear of practically everything, whereas it is more difficult to make humans fear flowers than something that moves rapidly, such as e.g. snakes or spiders.

Thoughts, emotions, bodily responses and behaviour will affect each other in different ways, and a change of one of these will frequently entail a change of the others and explain a person's possible evasive behaviour. If, on the bus, a person will for instance think: *"Oh no, now they will all notice me, and I believe I'm going to have a cardiac arrest"*, and the cerebral threat system mistakenly learns to link bus with danger, this system will quite subconsciously release autonomous bodily responses whenever this person will be boarding a bus or perhaps even at the thought of the bus. This is because the amygdala cannot discriminate between reality and notion, or between the state of dreaming and wakefulness. When such areas of the brain that are conscious register the subconsciously released bodily reactions, one will frequently misinterpret these as being dangerous, such as previously described; and the negative automatic thoughts will retain a person in the belief that what he/she experiences and feels signifies danger, and, hence, the bus will be dangerous. This experience we shall then describe as the feeling of anxiety.

Cognitive/behavioural therapy

In cognitive/behavioural therapy one learns to *identify* the negative automatic thoughts – based on the cognitive element (the conscious part of the process), and to *restructure* these into logic, rational and more objective thoughts and alternatives. In the behavioural element, one does not train evasion but rather, bit by bit, repeated exposure to such objects that one fears in order that the threat system (the amygdala that is the subconscious part of the process) will be supplied with new experiences and data to demonstrate that there is no danger. This means that the subconscious faulty linkages between bus and danger is disproved by new learning that will "override" the old faulty linkage. The behavioural experiments then prove that nothing dangerous will occur, and, slowly, *the amygdala's faulty linkage is changed* by new learning which will mean a reduction or cessation of the body's autonomous responses – the anxiety will decrease and, in the end, disappear.

There are no direct nerve links between the conscious structures of the brain and the amygdala (only indirect), and this is generally why – once the amygdala has learned something – we cannot simply change the threat system and its autonomous responses through the recognition that we are not in danger. This is why it will often take longer time to restructure the subconscious threat system as compared with our negative automatic thoughts. This is also why therapeutic forms that solely focuses on the childhood and the origin of the problem will fail at this level. The problem here is that though rationally recognising that we are not in danger, we will still feel the body's autonomous responses and thus do not experience the disappearance of the anxiety. This will retain one in the continued misconception that something is wrong or dangerous, and we are not able to get rid of the anxiety. The reason why there are no links from our consciousness and thoughts to the amygdala is probably owing to the fact that such linkage would be lethal since, when being in a genuinely dangerous situation, we would try to suppress the discomfort relating to amygdala's initiation of the body's autonomous responses; and, consequently, we would not react appropriately relative to the threat.

Learning to restructure negative automatic thoughts in cognitive therapy takes place via the therapist's help to challenge these and teach the anxious person to view misinterpretations rationally in order that one does not overrate the danger and underrate one's own resources. Relative to the previous bus example, the therapist will help the anxious person to think more realistically and constructively: *"The other passengers are used to wait for other people, and I have as much right as anybody else to be here, taking my time to find my money"; "It is also unreasonable that I let myself be controlled by what other people may think – thus submitting to others when I don't even know what they are actually thinking, but simply interpret the worst imaginable on the basis of my feeling of anxiety"; "Even though my heart is pounding and skips a beat, this is absolutely harmless and simply a sign that my cerebral threat systems have not yet learned that this is a harmless situation"; "The fact that my heart is pounding is just a healthy sign and, also, a reason for exercising, because a rapid pulse will counteract atherosclerosis and coronary thrombosis"*.

If one learns to think along such lines, instead of the previous negative automatic and mistaken thinking and also learns to train such thinking in anxiety situations, having a repertoire of sensible and more realistic thoughts, one will gradually become enabled to help oneself to get rid of the anxiety. A feeling may colour the content of what we think and thus

distort our assumptions in either a negative, or perhaps an exaggerated positive direction (e.g. a person in love). It is thus important that, in anxiety situations, we learn to think logically and rationally and to eliminate misinterpretations. The realistic assumptions are neither excessively negative or excessively positive but expedient and helpful in case of misinterpreted anxiety.

Moreover, a realistic assumption is proportionally much more positive than a negative automatic thought. However, it is seldom any help just to think positively. If, for instance, one hates rain, there is nothing gained by telling oneself that that it is wonderful, but it is not fair that rain shall be given so much power that it will put a person in low spirits. A much more realistic approach to rain could therefore be: *"I cannot change the weather, but I can make the best of it and brew myself a hot cup of tea, sit down in my sofa, and enjoy a good book"*. The person in love will have many positive, automatic thoughts, the anxious or depressed will have many negative automatic thoughts. The most common state is that we will have both kinds, but mainly neutral automatic thoughts. The positive thing here is that we can learn to restructure the negative automatic thoughts into more realistic thoughts which will then affect our emotions in a positive direction.

When we have repeated a behaviour, feeling or thought a sufficient number of times, the brain will be structured in such a way that it will make such a thought automatic in order that we do not need to think about and consider everything every time, as – instead – we can just move into "autopilot" mode. This will save us from using too much energy on insignificant things such as for instance thinking on how to keep our balance when cycling, or how to hold knife and fork when we eat. We also increase survival by concentrating on other dangers, for instance when driving a car, instead of having to think about how to shift gears.

At times, however, we may misconceive a behaviour on the basis of the bodily responses, feelings and thoughts attached to it – and such misconceptions may then become automatic as in negative automatic thoughts. This may be unfortunate because every time we experience certain situations (such as e.g. on the bus) we may be at risk of thinking negative automatic thoughts such as e.g.: *"I can't do this, something will happen, I'll become anxious and have to get out, but as the bus begins to roll and I can't get out, I'll faint or I may even die because of my dizziness and heart palpitation"*. Frequently, the reason may not be thoroughly considered, but by looking into it – as is done in cognitive therapy – one will often find the negative automatic thoughts, feelings and bodily responses attached thereto. As one gradually learns to restructure them into appropriate, realistic constructive thoughts, one will be increasingly encouraged to embark on the next phase of the therapy, namely the behavioural experiments targeted at the amygdala's threat reactions.

The significance of emotions

It is important to understand that we need not be afraid of our emotions, as they are actually there to help us, and that it is primarily about understanding them rather than being captured by them. Many have failed to realise why, in fact, we have emotions and what to do about them. Emotions are among the most important tools in our lives, and without them life would be pretty empty and meaningless. Over time, certain schizophrenics will become shallow of feeling, also called "anhedonic"; and here it is clearly seen that they

lack cheerfulness and zest for life. A large part of the meaning of life is linked with our emotional life, and one is tempted to say that the very meaning of life is to experience our emotions and to create as many good ones as possible – to the benefit of ourselves and others. To the anxious or depressed person, it becomes obvious how large a part of our lives that depends on positive emotions.

Our biological make-up will guide us by making us evade in case of anxiety, discomfort and pain; just as passion, happiness and sensual pleasure will make us seek out more of this – and both will be contributory to increase survival. We will e.g. feel displeasure in the event of hunger whereas eating will engender lust which will make us build up our energy depots and bodies. We will be "lured" (motivated) to drink by the enjoyment of slaking our thirst. We will, in general, avoid physical pain in order to avoid injury. We are urged to reproduction by way of the enjoyment attached to falling in love and sex.

Why do we contain so many negative emotions such as anxiety or sadness – are they also advantageous?

Maybe understanding will be easier on the physical level than on the mental. If one has an injured knee that hurts, only the few will ignore such a state but rather see a doctor to get it examined, maybe by an X-ray. Then, a sensible treatment can be planned by way of rehabilitation and exercise. In principle, the mental feelings are no different, but we more often tend to ignore them. We bury our heads in the sand and do not try to find a cause, hoping that it will pass. We "ride the emotional train" rather than "getting off" and we omit to take an "X-ray" of our negative automatic thoughts in order to find the cause. But – just like the physical pain – the psychological anxiety or depressive emotions are trying to tell us that something is wrong and that there is something we need to have examined and solved before simply "continuing our ride" as if nothing has happened.

Emotions also try to evade pain and, as, primarily, they distinguish between pleasure and displeasure, danger or non-danger, we also tend to avoid dealing with displeasure. It may work for a while, but neither the physical nor the mental pain will pass by being ignored or by focusing so much on the symptom (the pain) that the symptom becomes the most important – at the expense of the cause. Only by tracking down the problem and what is maintaining it, can solution methods be worked out.

A similar avoidance of psychological pain, anxiety and depression will lead to a person's evasion and seeking relief through sedative medication, alcohol and drugs. However, the amygdala cannot unlearn anxiety if it has no sensation of the threat; and, hence, behavioural therapy will have no effect when the experience of the threat has been dulled. It is therefore absolutely necessary to begin by phasing out benzodiazepines, alcohol, cannabis, etc. before initiating any work with exposure and behavioural training targeted at the extinction of the amygdala threat reactions. This is where some will give up (evasive behaviour) as they are convinced that they cannot manage without them.

There are almost always solution models for psychological problems such as anxiety and depression, but we frequently opt out of these because we make the symptom, i.e. the pain and our lacking energy responsible for preventing us from looking into the causes and solution models. Another obstacle may be that we are sapped of solution models and have no alternative repertoire that might help us. Hence, complaints and symptoms shall be

broken down into problem definitions before any alternative solution models can be proposed. Just as the leg will not heal by making do with complaints about the pain, our anxiety cannot be dealt with and resolved, unless the stressful and sustained factors are supplanted by healing treatment.

Medical treatment

Antidepressant medication such as SSRI agents may also represent alleviating solutions against anxiety. Occasionally, the medication is used as support in connection with therapeutic work. But, in the longer term, the objective is to make medication superfluous since, though it may alleviate the symptoms, it will not basically change any of the negative automatic thoughts that constitute the basis for the misconceived emotions.

Working with the emotions

It is by far the easiest for our emotions to affect our thoughts than the other way around, and it is not possible to take conscious control of the amygdala and our autonomous bodily reactions. Behaviourally, we are primarily subconsciously governed by the mammal brain (the limbic system) and our emotions, even though we seem to experience that our actions are based on rational and conscious choices. This way, it is also easy for our emotions to "seduce" and distort our thoughts into believing something unrealistic – or for our thoughts to rationalise and misinterpret on a background of strong emotions and subconscious processes in our brain. Such negative automatic thoughts may be classified into various categories called cognitive distortions. This may e.g. be black/white thinking, generalisation, selective attention, emotional conviction, etc.

If, for instance, one is afraid of going insane or losing control during an anxiety attack, it is important to rationally tell oneself that though one feels that this may happen, this is not what is actually happening. If, on the contrary, one says to oneself that this is the case, one will also experience (feel) that this is so, even though it is not. If one were a judge of the supreme court who had to impose a life sentence on a person because of a murder having been committed, one would hardly pronounce a sentence because one felt the given person to be the perpetrator, but rather on the basis of logical evidence. Much too frequently, we tend to trust our feelings and bodily reactions rather than a logic and rational basis. Thus, we may come to pronounce a sentence of anxiety imprisonment on ourselves.

That our feelings will often be stronger than logical argumentation is owing to the fact that we experience the feeling and the autonomous symptoms but not the rational thought; and hence, we may consider the feeling to be truer and more credible.

If basic needs such as love, security, care, understanding etc. are lacking to varying degrees during one's childhood and youth in which period the brain is highly susceptible to be influenced by what we learn, we may develop severe scarring on our mind which will be stored in the amygdala and release anxiety in similar situations in life. These scars may develop into universal and basic assumptions about oneself and others in contrast to the more here-and-now situation-provoked negative automatic thoughts. These scars on the mind are referred to as **schemas** or life-triggers or life-traps, because they feel real. We believe in them as they have become a part of our personality, and as we have been im-

printed by them early in life with no one to help us understand that they were faulty installations.

Examples of schemas:

- Low self-esteem, not feeling good enough and feeling weak, unlovable, deficient/wrong, something is wrong with my interior and/or exterior
- Betrayal/abandonment/unstable relations
- Weakness/dependency on others
- Over-involvement in others
- Outsider/a feeling of not belonging, socially isolated
- Failed study and career
- Distrust/mistrust/abuse
- Submission/anxiety for expressing one's needs to others
- Rigid norms by way of control and perfectionism
- Acknowledgement-seeking
- Worries
- Pessimism

Frequently, schemas are more focused on self-esteem and relations to others, whereas negative automatic thoughts are often about situations or misinterpretations of the body's reactions. Even though schemas are not "right", they feel right; and they are often attempted to be solved by various coping strategies that may be everything from being over-amenable to domineering, or by an evasion of the situation. Subconsciously, one may also set up rules of conduct in order to try to compensate for the destructive schemas, such as striving for perfection and control in order not to fail; or attempting to please everybody to prevent them from being angry at or cross with one. Since this is not obtainable and since one has set a standard which one can only seldom comply with, schemas to the effect that one is not good enough or unlovable will constantly be confirmed, thus retaining one's misconceived assumptions.

Frequently, schemas are not essential in the treatment of e.g. panic anxiety. However, if the anxiety is so widespread that it has affected most of one's life and relations, work and leisure time, it will be important that one's schemas, coping strategies and rules for living should also be involved.

The universal interior battle

Emotionally affected thoughts (negative automatic thoughts) and rational thoughts may be very much "at odds" with one another and make various reciprocal choices. This may explain why we can be so ambivalent and divided in many situations. By a 100 percent certainty, persons suffering from fear of flying and fear of being cooped up in the cabin will, by their most firm emotional conviction, wish to get out (the evasive behaviour is indeed the mechanism by which we normally try to reduce our anxiety, which cannot be done inside the airplane, and hence anxiety will increase), whereas, by a 100 percent certainty, the rational thought will have no desire to leave at the height of 10 kilometres. I.e. the negative automatic thoughts or emotional thoughts will *want out by 100%*, whereas the rational thoughts will *not want out by 100%*. This is also one of the explanations why a person suffering from OCD (compulsive ideas and compulsive behaviour) who is a 100% certain that

the door is not locked and thus must be checked again and again, although – rationally – he/she is 100% certain that the door is in fact locked. The emotional thought and the autonomous reactions have a stronger impact on our behaviour and motivation rather than reason, as this increases survival. In general, this ambivalence, dialectics and emotional control may perhaps explain some of the reasons behind the world history's many wars and man-made catastrophes.

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Facts on anxiety:

Anxiety is not dangerous

Anxiety is a feeling, and feelings are not dangerous

Anxiety will always pass

Anxiety will not make you vomit

Anxiety will not make you faint (with the exception of phobia about blood/needles) (Hyperventilation is not anxiety)

You cannot die from anxiety

Anxiety will not make you go insane

Though uncomfortable, the "feeling of unreality" linked with anxiety is not a sign of anything serious and is quite frequent in connection with anxiety

Anxiety will not make you lose control

Panic anxiety is misconceived anxiety and can be unlearned

The bodily symptoms related to anxiety are not dangerous but lifesaving in connection with genuine danger

You will not suffer a coronary thrombosis or cardiac arrest because of a very rapid heart rate related to anxiety. The heart skipping a beat once in a while is quite normal.

Breathing problems experienced in connection with anxiety will not lead to suffocation

Though the reason why panic anxiety *feels* right and true it is not necessarily rationally right and true, but just "negative automatic thoughts" and natural bodily reactions

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