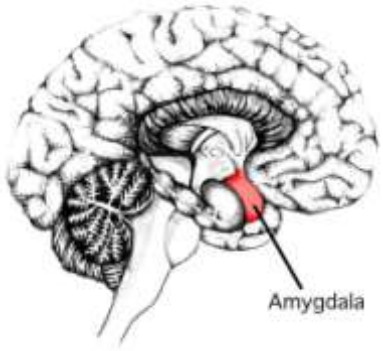
Physiology of Fear

In regard to trading, perhaps the most limiting issue that traders face is the emotion of FEAR. This emotion has been the cause of many failures in my personal endeavors and instead of studying the market to find out some new pedantic method of trading I decided to study what was causing me to fail the most basic of trading skills. While many say that fear and greed, are at the root of most all trading mistakes, I dare say it is fear that is perhaps *the* leading cause of trading errors, and/or failures.

Consider for a moment, in your last trading failure. Did your trade fail because you had so much money in your trade and you wanted even more? Or was it because something caused you to: (a) adjust your position size too big or small, (b) Set your stop too close or too far away. (c) Not use stop at all, (d) Hold for an unrealistic profit target only to see everything crash and burn.

There are many others but these are all results of fear…not necessarily greed. Fear of missing out. Fear of losing. Fear of wining (yes that is a fear also). Fear of being wrong. Fear of ridicule. These are but a few. No doubt if you dig even a small way under the surface of your psyche you will find them (you fears) lurking.

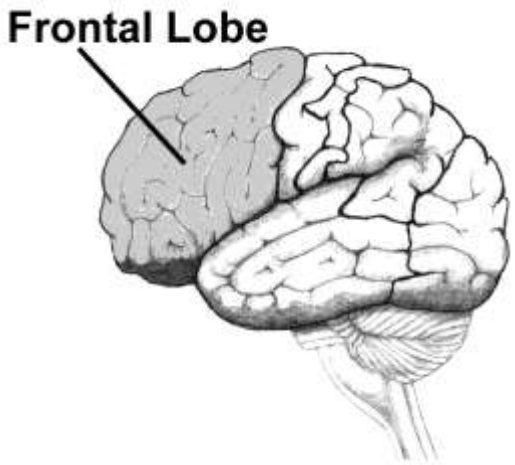
Instead of learning some new method of trading, why don't we apply our analytical skills to the study of what is limiting our performance, i.e. Fear.



Where does fear come from? Fear is one of our most basic emotions. It has its strength in survival and is a function of the amygdala, located in the parietal lobe of our brains. Its job is to process external sensory input and respond with an emotion that triggers an instinctive action, commonly known as "fight or flight". Note how close it is located to the central brain stem. It is part of the most primitive part of our brains allowing our survival in hostile conditions. One of the most interesting things I discovered in studying this part of the brain is that it "short circuits" reasoned thinking. The emotion we experience as "fear" is specifically designed to prepare your body for action, either running away, or fighting to survive. It sends stimulatory signals directly to your voluntary muscles, and increases your heart rate and breathing so as to prepare you for any physical challenge you might need. This same mechanism also turns off unneeded processes, like digestion, and (you guessed it) higher reasoning. It is one of our most primitive responses to our environment.

Worthy of note is that when the amygdala is active we are receiving input from our external environment that is being processed in this way, and in so doing, any higher reasoning, is NOT being processed. Yes that's right folks, when we experience fear, our thinking brain turns off! Does this help explain a few things? It sure did for me. Whenever I felt my stop was in jeopardy, or my trade came crashing down, I couldn't think straight. In the moment it didn't even register. I would just take some action that, at the time, seemed right but then in retrospect (after the fear had subsided), I could see that my action was illogical at best if not downright stupid.

I would realize that my response was fear driven, and even that I may have acted in a mild form of panic, (which-by the way- I am NOT prone to), but all the same I look back on my actions and wonder why I did what I did.



Now let's talk about another part of our brains, the frontal lobe. As you may know, this is the area of the brain where higher reasoning takes place. This is where our conscious self, "thinks". This is the part of your brain that analyses, plans, and constructs a viable trading plan. The frontal lobe then stores information in the form of short term memories. It is the largest part by far and occupies 1/3 of your total cerebrum. Interestingly enough it is prone to sensory overload. Often times we overload our frontal lobe by "over studying" or pushing too much information at it in too short a time. It takes time for the information to be processed and stored. As well it takes time to form memories and the access those memories in a rational fashion so as to form a logical progression of thought, that we can understand and use. In short your frontal lobe helps you analyze your market conditions, formulate a plan, and even begin to carry out that plan. All goes well until you experience FEAR.

There are many things that trigger fear, but of utmost importance is that you recognize WHEN you are beginning to experience fear. How is this done?

Remember "fight or flight"? This reaction has physical signs and symptoms that can be monitored, to produce a bio feedback mechanism can help you recognize when you are beginning to experience fear. Elevated pulse rate, increased breathing, dilated pupils, tense muscles, even a small bit of nausea as your digestive system shuts down. (That bad feeling in the pit of your stomach). You may also feel like it is harder to hold a particular line of reason or thought because you feel "distracted" or anxious. These signs can be recognized and monitored to help you understand when your body is involuntarily reacting to a fear stimulus, which is almost always external.

The cruel joke is that when this starts to happen, reasoned thought is beginning to turn OFF so it is difficult at best to recognize on an intellectual level, what is happening and correct it.

The good news is that a recent study done in 2007 showed an interesting way to refocus your frontal lobe and actually turn OFF your parietal lobe responses to external environment. Dr. Andrew Newberg studied the brains of several Tibetan Buddhists when they meditated, and found that activity in the frontal lobes increased dramatically while activity in the parietal lobe decreased. Again the parietal lobe is the area that gives us our sense of orientation in space and time. This is done through external sensory input. This same experiment was repeated with devote Franciscan Nuns with similar results. The focus of this study was to see any physical changes that occurred when one devoted in their beliefs prays or seeks enlightenment.

Now before you all turn bended knee and start asking the Almighty for trading success, consider this for a moment. The act of praying or meditating focuses the frontal lobe again and actually turns OFF the external fear trigger. This renewed higher brain functioning and serve to help you recognize what might be triggering your fear, and help you develop a method for controlling it by refocusing on your higher reasoning and not allowing your frontal lobe to turn completely off.

While this study was not conclusive in anyway, it does provide food for thought about how we as individuals can use this information to our advantage. The answer does not necessarily lie in further market study, but rather the use of our cognitive reasoning to find our own fear triggers and systematically turn them off or control them. The use of

meditation or prayer is certainly an option, but the idea is that highly concentrating on a central theme refocuses the frontal lobe and shuts down the stimulus for fear.

In a recent edition of **Psychology Today**, (1-13-13) Dr. Sandra Boyd Chapman, PhD offered some suggestions to assist in keeping our frontal lobes working at peak efficiency.

1. **Avoid Auto Pilot**. Keep your brain active and curious. Challenge your thinking every day. A brain on auto pilot is a bored brain. Now when you sit down at your trade station to make decisions, try and do so with an active and alert mental state. Being on "auto pilot" cannot be good for trading decisions. (This was especially true for me at 3:00 am trying to trade the London session.) If you find this is the case, perhaps take some time away from the computer and engage in some physical activity or challenging distraction AWAY from your trading to refresh your frontal lobe.
2. **Decrease information exposure**. Information overload freezes the capacity to think clearly. Looking at the market "every which way" may be too much information. Learn to filter out what you really need and use THAT to make decisions. You may be surprised at how little you really need to make competent and clear decisions in your trading.
3. **Move beyond memory**. Memory and critical thinking work independently. Trying to remember too much counter acts brain efficiency, causing you to actually remember less, and reason less efficiently. Remember it takes time for your brain to process higher reasoning, then to store that as a memory, then to use those memories to form new reasoning. How often did you cram for an exam and then forget everything when the time came to use your memories? Learn the concepts, apply the logic, then write down critical points to help you remember. Don't try to memorize everything.

I hope these points will assist you in your trading and perhaps help you find issues that you can focus on to improve not only trading but life as well.