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Neural Balances Theory

Neural Balance Theory argues that the circuitry of the brain, the propagation and inhibition of neural firings act to calculate the correctly matched pleasure and pain producing emotional profit. The weightings in the circuits act in pairs as unequal arm balances to recognise patterns, chose behaviours based on emotional profit and make learning decisions that extend the emotional profit calculation. The circuitry is enhanced where a behaviour is satisfying and inhibited where a behaviour is dissatisfying. Emotional profit is optimized according to this theory rather than subject to habit. Neural Balance Theory creates a form of emotional logic that opens up the mind's cabinet of emotion. Emotions are defined in this framework such as love, hate, guilt, gratitude, happiness, sadness. The functioning of the unconscious drives and the operation of the ego are explained. The personality is understood from three new perspectives: agency, affinity, autonomy, based on the three central emotional calculations of the mind:

i) Actual versus expected emotional profit,
ii) My benefit versus your imagined benefit from a cooperation,
iii) The choice to lead or follow in a relationship. Hypomania, depression and anxiety are shown to be functional emotions rather than morbidity. However, humans are seen to be unstable creatures that require faith, family and friendship to successfully regulate themselves.

Neural Balances Theory

Unequal arm balances

I conceived the idea of the balance of emotional benefits some 2 years ago while I was still struggling to accommodate the facts to strengthen the foundation of the concept. Over this time I refined the model and eventually derived the maths. My initial insight was that drive is a function of prediction reliability and predicted benefit. I came to this conclusion after reconciling Herzberg's motivation-hygiene theory with Coopers and Lybrand's prediction-based requirement for change which I found in their knowledge database. However, not being a mathematician, but having a solid background of computer engineering and the logical reasoning skill I developed, I attempted to resolve this equation not mathematically, but with a mechanical process.

The balance I conceived was not just an ordinary balance or scales but an "unequal arm balance". You will have seen an unequal arm balance perhaps in a doctor's surgery where when weighing a baby the nurse slides a piece of metal across the scales and it comes to balance. The remarkable thing about these scales is that when the baby is taken off the relative weight of the baby remains recorded.

In the markets in Chinese towns and villages you can see an unequal arm balance in action. There is a stick with a pan on one side and a weight that slides up and down the stick on a string. The whole contraption is held in the air by a third string near to the pan. These Chinese unequal arm balances weighs things without the need for a set of weights like a western set of scales.

A chinese unequal arm balance

A way to imagine an unequal-arm balance is to imagine a balance where the fulcrum slides along a fixed staff. When unequal weights are placed upon it the fulcrum moves in the direction of the heavier weight until again the balance comes into equilibrium. Again when the weights are taken off the position of the fulcrum along the staff records or remembers the relative weighting.

An unequal arm balance coming to equilibrium

In electronics and robotics and in some systems of predictive sports ranking this is known as difference over sum. A balance is even our expression of legal fairness. We talk about weighing up a situation.

The memory feature of the unequal arm balance means it could be called a memory stick. These memory sticks can be expressed mathematically as:

$$(x-y)/(x+y)$$

X and Y must both have positive values for a balance to work. Under this limitation the balance has a value from 1 to -1. Interestingly these values are continuous. It can be 1 or 0.8 or 0.88 or even 0.888888. Compare this to the computer switch which has a discrete number of values. It is either 0 or 1 in the case of a conventional computer.

There are 100 billion neurons in the brain and each has up to 10,000 synapses. We know it is the weightings of these synapses that cause the brain to function. I propose these synapses are collectively acting like trillion upon trillion of unequal arm balances, or memory sticks. Unequal arm balances make it easier to understand how the mere 20W brain machine in our heads can be so powerful.

Calculating emotional profit

The memory stick is binary but the information we receive in our brains is binary too: pleasure and pain.

My theory is that the brain works on net of pleasure and pain. The effort of walking to the park is matched to the pleasure of eating an ice cream in that park. The result is the net emotional benefit of going to the park. Without matching of pleasure and pain the value of the sensory information is massively reduced.

But how does pleasure get correlated with pain? How can the strain in your legs from the effort of walking be compared to the pleasure of ice cream? The answer I believe is that the sensory system creates the calibration itself by the weight of the firing of the neurons involved. So the firing of a muscle spasm is far greater than the firing caused by an itch. Cream causes more firing than butter.

But if the system is self-calibrating facilitating the matching of pleasure and pain, how does the brain calculate net profit?

I argue that pain signals are inhibitor and pleasure signals are propagators of signals. However, dependant on the sensory nerve pain signals are also propagators and pleasure signals are also inhibitors. Overall these combinations of propagation and inhibition produce emotional profit (pleasure - pain). The complex circuitry enables pleasure to be matched to pain.

The current theory is that the brain associates sensory information with behaviours. This is seen in for example the conditioning of an eyelid response to puffs of air. The problem is that this conditioning is often seen in a passive way, it is understood as habit formation. My view is that the system is optimizing based on prediction. It's not homeostatic like physiological control systems. It is not habit. It is optimization of emotional profit.

Decisions of choice

But how does the brain relate signals of emotional profit directly to behaviours, which it must be doing for optimization to work? If the propagation and inhibition of neural firing explains how we calculate emotional profit, what is behaviour?

A behaviour can be broken down into patterns and decisions regarding patterns and learning about patterns. This learning is itself a form of decision, should I learn or not learn from the outcome of a behaviour? We are familiar with neural networks producing patterns but how would neurons make a decision and learn?

Patterns and their related emotional profits are selected for by the memory stick. The stick weighs up the two expected emotional profits of two patterns. This is expected emotional profit (E) optimization. Where E1 is the expected emotional of one behaviour and E2 is the expected emotional profit of another behaviour.

$$(E1 - E2)/(E1 + E2)$$

Computer algorithms for sorting also work in a binary fashion but the memory stick is much more efficient at prioritising because it does not just report more or less but how much more and how much less.

Most of the time we are merely weighing up whether to simply change behaviour from a current to a new one. But we always have a feel of how much better one option is than the other because the memory stick gives values 1 to -1, a range where 1 is very good and -1 is very much less good.

There is tremendous evidence that attention and decision are based on emotional inputs. Patients with damage to the hippocampi, at the base of the Limbic system, become incapable of making a decision. Their IQ remains unaffected but they cannot make their mind up. The Limbic system is

supposed to be the emotional centre of the brain and it is at the core of brain processing according to neural balances theory.

Other research points to the fact we actually make decisions some 6 seconds before we are aware we have made them. This infers the decision making is at a deeper, non-linguistic level - the balance of emotional benefits.

Learning decisions

The memory stick comes into its own in learning. You weigh up the emotional profit you expect for a behaviour (E) against the emotional profit you actually get (A). In other words you decide whether actual is better or worse than expected. The neural calculation is simply:

$$(A-E) / (A+E)$$

A score of 1 is maximal satisfaction and -1 maximal dissatisfaction. This satisfaction and dissatisfaction become new cognitive pleasure and pain and become part of emotional profit calculations of behaviours. In this respect the maths is combinatorial. The outcome of the memory stick may increment forward the expected emotional profit E1 such that:

$$E2 = E1 (1+((A - E1) / (A + E1))$$

This makes it more likely for the behaviour to be repeated as this satisfaction increases the expected profit of that pattern or behaviour. Likewise dissatisfaction decreases the expected profit of the pattern or behaviour.

The combinatorial approach has an averaging effect so behaviour is not directly driven by the last instance. Nature is fuzzy, unpredictable, so averaging saves the organisms from going down too many blind alleys.

The size of expected profit carries within it information about the relative likelihood of the behaviour to produce profit in its environment. The accumulation of expected emotional profit drives the probabilistic nature of behaviour that has been observed by behaviourists.

Perception

Perception is one of the areas where conventional AI falls down. The existing neural networks have to be trained sometimes millions of times before they recognize usefully. Take a three year old for a walk and point at an animal perhaps a cow and they will quickly start annoying you for the rest of the day pointing out all the cows they see. They do this because they are getting satisfaction from their increasingly accurate expectations of cows.

We have a sense of confidence in what we see. Conventional Neural Networks cannot do this very well. We can say it might be, I think it is, it could be and it definitely is a cow or a dog or a cat.

When neural networks are trained the training phase and the testing have to be quite distinct. Learning and recognizing in humans tends to be of a continuous nature.

The memory stick is about decision. Pattern recognition is really a type of decision. Perception is just another form of learning decision. We compare in a memory stick actual visual or audio properties against our expected property for that sense. The result of the balance increment forward the expected value. Then recognition occurs where the memory balance score zero as both the actual and expected properties are the same. The same mechanism is used for learning and recognizing.

R is roundness of cow, ER is expect roundness and AR is actual roundness

$$(AR - ER)/(AR + ER)$$

When AR > ER there is satisfaction and ER is made more round

When AR = ER there is recognition

Only it's not ever a score of exactly zero. The perception approaches zero and closer to zero the more confident the person is of their vision or hearing.

For any object viewed there is up to 20 different properties to be compared. The more properties that are recognized the more confident we feel. We are capable of guessing an object when exposed to just one or two properties.

Our visual fields become meaningful because each object we perceive is a pattern. Two or three patterns can have a further pattern that connects their behaviour. These patterns all can generate satisfaction and and dissatisfaction from learning decisions.

The comparison of actual to expected is essential to learning. The importance of active learning is demonstrated in "the kittens in interconnected cradles experiment" where one kitten could walk and the other's movement was dependent on the movement of the active kitten. The kitten that was passive remained blind. The importance of expectation is shown in the "Gorilla in the basketball game experiment" where the viewer of a recorded basketball matches were so busy counting passes that they did not notice the gorilla walk across the court.

Movement

The memory stick can control muscle by comparing the relative strain of two antagonistic muscles, such as the biceps and the triceps, and comparing the strain of one muscle with its expected strain. The former creates a spatial coordinate for any given limb. The memory sticks then controls the movement to that coordinate by comparing actual muscle tension with expected

muscle tension.

(tension of muscle 1 - tension of muscle 2)/(tension of muscle 1 + tension of muscle 2)

It is worth considering the resolution of a synapse in a memory stick. It is dependent on the number of receptors at the synapse which probably runs into the billions. That is very high resolution and great smoothness movement results.

Implications of Neural Balances Theory

Play

Play is the pursuit of satisfaction from prediction where the objects of prediction provide no direct reward other than fulfilment of a prediction. Play is the ultimate learning process. We find a new behaviour through our random process of creativity or copying others. We start with a low expectation of our performance and get satisfied as we perfect the skill. Ultimately though when our expectation meets our actual experience and we get no more satisfaction. That is when:

$$(A-E)/(A+E) = 0$$

At this point we stop playing the game, where A = E.

Intelligence

Intelligence would be best measured in the ability to make real decisions rather than solve abstract problems. But IQ is easy to measure, decision making ability is not. Decisions are founded in emotion so better decision making requires experience. We all have potential to make good decisions, it is our common sense. What IQ really measures is the ability to hold larger amounts of information in the short-term memory so it can be processed quickly.

Happiness

A man will climb a mountain for the split moment of satisfaction he gets from raising expectations of himself towards an actual - self actualisation.

Imagine two mountaineers climbing a mountain. As they reach the summit one of them falls and breaks his neck and dies. What does the second do? He picks up his friend’s body and climbs that last five hundred metres carrying his friend on his back. He reaches the summit and cries tears and joys and anguish. He carries his friend down to the bottom of the mountain happier and sadder than he has ever been in his entire life. Why do people settle for simple emotions like happiness over sadness? Life gives us a cocktail of emotion which are all to be savoured.

Depression gives new colour to our vision when once we have recovered and struggling to do so deepens our capacity for compassion.

Happiness is merely finding yourself in a place you want to be and being able to stay there. Unhappiness is about being in a place you don't want to be and trying to get away but not being able to. The pursuit of happiness is misconstrued. You cannot pursue happiness, it is like a dog chasing its tail. Sometimes we are happy and sometimes we are unhappy. What matters more is having meaningful goals.

An emotionally logical approach to life would be the Vedic philosophy of:

"Enjoy what you do, not what you've done, but set very high goals"

This approach to life escapes you from chasing those moments of satisfaction. It does not mean living "in the present moment" only because you pursue high goals, you just enjoy getting there more and are surprised by the outcome and never disappointed.

Sadness

Dissatisfaction is the social pain from the process of unlearning. When you find a prediction is wrong you feel sad. This is social learning, it is designed so that your learning is shared.

Addiction

The emotional profit of successful behaviours accumulate through repeated lessons of satisfaction increasing expected emotional profit. It is the process of accumulation that drives behaviour in both markets and mind. So it is not merely emotional profit of one behaviour but the accumulated profit of that behaviour via learning that is selected for. The problem with this is that one behaviour that has a mediocre reward but relatively more regularly occurs could crowd out other behaviours. There must be decay in the accumulation so that this crowding does not happen. This decay is simply forgetting.

This model of accumulation of satisfaction powerful explains the problem of addiction. The reward of cigarettes is so high that the system does not have time to forget and the behaviour crowds out other behaviours until the addictive patterns of behaviour emerge. You can successful give up smoking and forget the reward overtime but one cigarette reminds the system and the crowding out happens again. The only way out is to give up for good.

Consider a rowing club who would compete to see who would go out on the river in the most shitty weather at the worst possible times of day. They were addicts. If you force yourself to do

any activity long enough, including waving your arms about like Fah Lung Gong, or meditating incessantly, the behaviour starts to crowd out your brain and you become an addict. It is not habit though. It is due to expected emotional profit optimization. Addiction is a true suboptimization of the human reward system.

Mood and mood disorder

The rate of accumulation of emotional profit can vary overtime. This is where I believe different levels of certainty come into play. This is what causes mood changes. If the accumulation is faster you become more certain and more focused on a specific new idea.

This difference in perspective is evolutionarily useful because it provides different learning perspectives that heighten learning efficiency.

For me hypomania results in focused behaviour as if this accumulation rate was massively speeded up. As if satisfaction from learning was even greater so accumulation for expected emotional profit is higher. As in addiction certain behaviours crowd out the reward system.

In pre-scientific eras there was almost total uncertainty about the world, from whether the sun rises to why people get ill. The Romans would cut open cow guts to help them make decisions. Under these circumstance the extreme single mindedness and certainty of the manic mind may have had its uses.

Mundanity

Adults in part differ from children in that the world is more predictable to adults and therefore less interesting. The tragedy of humans is that we are bored by what we see as predictable, even if that predictable thing is the most beautiful process in the world - life itself.

Genius

The psychotic person has the advantage here as they slip in and out of realities and reality to them maintains is crisp taste. Perhaps this is part of the reason why genius and madness are so closely linked.

Love

Love means feeling good or bad when others feel the same. Thanks to our capacity for empathy we can internalize the pleasure and pain of others. If you feel good I feel good and if you feel bad I feel bad. We are then driven to act on this empathetic emotional profit if it is the largest profit in the reward system at a point in time.

Learning builds up a model of the world in our minds. If the model is not self centred it is more easy to optimize the emotional profit of others because you literally can own them.

One could argue that pleasure and pain are not real. They are merely information. But when we respond to them with action, the love is real.

Hate

If we love we risk being cheated. According to the theory of evolutionary stable structures cheating cannot be avoided and man is made of selfish genes. According to these theories cheating means that altruism or group selection cannot happen in evolution. Therefore man is limited at best to a tit for tat strategy in his relationships.

If you feel good then I feel bad and if you feel bad then I feel good – that is the mark of hatred. Love can flip, sometimes momentarily in some relationships, from love to hate. There could have been no love without hate.

Hate is necessary in a pre-legal system where there is no law to punish transgressors. In this case hatred is the police, the law and the prison cell.

Hatred is like the police. Hatred is loud, intentionally loud, very loud. It is like the nuclear threat in a primitive society. Once hatred breaks out it is infectious and spreads like wildfire. Therefore fair minded people try not to cheat each other lest they start it off.

Hatred is like the court. Once alight the person who is the cheat is likely to be exposed as they will have cheated the most people.

Hate is the executioner. It makes punishing rewarding. If you feel bad I feel good. It is not like anger. Anger can lead to fighting. Hatred is aimed at long sustained behaviours of social isolation. Isolation is worst punishment in every prison.

The genius of Jesus was to understand that with the imposition of God's law via scripture there was no more need to hate. It is then the law that punishes we do not have to. That through non-judgment and forgiveness, which always requires personal sacrifice, we need hate no more. As he said he came not to change but to complete the law.

Depression

And here is where depression comes in. Depression is nature's punishment cell. Social isolation leads to depression which is painful. The aim of hatred is to neutralize the social threat not destroy it. Any adult that has reached maturity is a valuable resource evolutionarily. Depression leads to apathy and a reduction in threat. The fact that we have so much depression in our society is a reflection not of mental illness, but how distorted our society is. We are literally punishing each other with our behaviours.

And of course hating yourself leads to the worse kind of depression.

Mourning

And what of mourning?

You have just got home and you think I'll have beans for dinner. Then you remember you will not have the beans tonight with her as you did for fifty years of marriage. You open the tin and feel the dissatisfaction as physical pain as you learn she will not be there next time and the time after that. That pain is a good pain it marks the significance of that person in your life.

This a form of self imposed punishment. All emotion in humans is social. When we are satisfied you can see it on a person's face, in the body movements, likewise dissatisfaction and love and hatred. When someone dies the social group is reminded of the importance of relationships by the emotion of depression. The pain signifies the importance of the relationship to us. Grieving becomes not a punishment but a gift, an act of remembrance. Some tribes grieve each time they meet an old friend for the time they lost by not seeing each other.

Fairness

Some decisions in the memory stick are particularly important. Love and hate emerge out of decisions. Fairness does too. It is the decision whether to hate or not. You weigh up your emotional profit from a cooperating behaviour, such as sharing a flat, against what you imagine to be the other person's emotional profit from the cooperating behaviour.

(my expected profit - your imagined profit)/(my expected profit + your imagined profit)

Gratitude

Let's say they allow you to have the larger room. You are out of balance so you equalize the balance by feeling gratitude which is nature's debt management system. You say thank you.

Guilt

You may feel guilt too and say sorry for the other person getting the smaller room. Guilt drives us to equalize the balance by cooking more of the shared meals for example.

The emotion of fairness is innate. We innately feel gratitude or guilt when the fairness balance is out of kilter.

Sacrifice

Here is where Jesus' genius comes into play again. You can avoid hatred if you take on the pain yourself to equalize the balance. This is sacrifice. Jesus in dying on the cross showed us with his

physical body that to maintain love requires sacrifice. Without the act of the cross I would not have been able complete my theory. Jesus was a key inspiration into cracking how love works.

Trust

This is a form of love where the first sacrifice is made up front. To trust is to make the sacrifice of taking a risk on someone.

Individuality and personality

We are all personalized but we are not individuals, as we are broken down by separation from the group. Individualism is a delusion.

The great number of possibilities of the weightings of our neurons means there is great scope for personalisation. We are all different.

We are distinct and love is specific. We love each other specifically. Jesus specifically said love thy neighbour. We know our neighbours.

Bullying

Interestingly fairness requires theory of mind and well developed and balanced model of your environment. This is why children are so cruel to each other. They recognize what is unfair to them but lack the frontal cortex development to recognize when the are unfair to each other.

The fairness balance requires you to “imagine” what is fair to the other person. This requires a mature frontal cortex.

Leadership

In this memory stick we decide what type of cooperation we will take part in. We weigh up whether we should lead or follow. Unlike fairness we take no reference for this decision externally. It is purely an internal decision. For this reason children are very good at it. It is all about determining the pecking order.

(leadership behaviour expected emotional profit - follower behaviour expected emotional profit) / (leadership behaviour expected emotional profit + follower behaviour expected emotional profit)

The serotonergic system is intricately involved in this process. It determines our status feelings. Coupled with high status is the emotion of certainty. High status people feel more certain. They

accumulate expected emotional profit more quickly. Likewise low status people feel more anxious because they lack certainty. They accumulate expected profit more slowly. The predominance of anxiety disorders in our society is not illness but reflective of the amount of control we experience without actually gaining the security that good leadership gives us.

We live in a very predictable, sterile, controlled world. It was once different. There was no certainty so decision making could not be done in a spreadsheet (or at least pretended to be done as outcome of the spreadsheet analysis will have already been predetermined by the emotions of the analyst). However, decisiveness was key to survival. Therefore epigenetically and developmentally some of us were leaders and some of us followers.

Worship

But if the leader gets high serotonin and certainty what do followers get? They get to worship the leader and that releases serotonin in them too. That's for many people there is nothing better than standing at the front of God's home, arms in the air, singing the praises of God whether he is imaginary or not.

Awe

The emotion of awe is the anthropomorphisation of inanimate objects and the feeling of worship at their great power.

Hope and Faith

Hope is expectation when the dopamine is pumping and you are emotionally switched on. It is so much neurotransmitter slush. Faith is a pure thought, a conscious conclusion. Faith any religion will tell you is a conviction.

Faith was another tenet of Jesus' philosophy, though this time in medicine. He always said it was your faith that healed you. Perhaps modern doctors would be more effective and certainly more honest if at that end of a treatment they admitted "it was your faith that healed you, not just our toxins and knives." They would then admit the power of placebo to their patients and possibly even maximize it.

Without faith we fall into the chasm of despair and this is a second reason for the predominance of depression in our society. Perhaps GP(General Practitioners) doctors should prescribe faith not Prozac(anti-depressant). Of course if they did that now they would be struck off.

Confidence

However, never have faith or believe in yourself too much or go around loving yourself too much. There is no need to focus on loving yourself. You cannot really love yourself anymore than you already do. You will always optimize your benefits for yourself. If you do hate yourself that is not a reason to start telling yourself you love

yourself.

Confidence comes from self knowledge rather than self belief. Believing and having faith in yourself is pointless when you can know yourself. Socrates said know thyself.

Consciousness

We live in boxes, the boxes are constructed from expected properties we see ourselves to have and linguistic rules we apply to ourselves.

The problem with the box is that we think we are the box, when we are not actually in boxes at all. What Freud called the ego is actual a set of behaviours manifested as language rules and properties. “I am the type of guy...” statements are typical for people with sharply defined egos. The rules are for example, when this happens I do that.

The ego defends itself. If behaviour gives a benefit or reduces a threat a behaviour is optimized whether a conscious or non-conscious behaviour.

To deny the existence of your own ego is as dangerous as denying the existence of the devil. They both want you to do deny them so they can hide away and do their nasty business.

So who are we if we are not egos? The memory stick allows for very high levels of personalization. We are all different.

Our non-conscious seeks truth because it is trying to build the best possible picture of the world. The most exciting insight I have into the human non-conscious is that this leads to truthfulness. There are four proofs of this truthfulness:

- In vino veritas
- Cognitive dissonance
- Body languages
- Our shared sense of profundity

In vino veritas

It seems when we flatten the linguistic ego self with alcohol the truthfulness pours out as quickly as we can think of.

Cognitive Dissonance

In cognitive dissonance we even lie to ourselves unknowingly to keep the inner world truthful.

Body Language

But resoundingly body language always tells the truth. Many criminals are now behind bars because the police read body language very well.

Profundity

In discussing my ideas with many people I have found that their usual comment is "that's profound". They have the capacity to see truthfulness even if they themselves don't understand linguistically how it works. This further evidence for the functioning of a collective truthful consciousness.

Collective unconscious

Our body language communicates, we communicate back and forth without realising it all the time. This communication is the collective unconscious. In it are patterns: the hero; the trickster and the wiseman. Trickster views the hero as does the wiseman, both teach him. The trickster is the ego defense hiding the truth from us.

Evil and good

Our underlying nature is truthful and fair. However, this nature is blocked by our ego, the way we present ourselves to the world and our conscious calculation of what we think will make us feel best. These calculations are usually suboptimal. Some people are cheats but even they are subject to the truthful expression of body language.

What could we call this inner truthful and fairness "true self". Buddhism calls it Buddha nature. I prefer to see it as a personalized thing, which does not mean it is ego. I would call it our true human nature.

But what about the truly bad people in the world? I have yet to meet one yet, but if I do I suspect that it is a profound ignorance of love that lets them down.

Creativity

Creativity comes from mangled behaviours in the non-conscious. Once such a mutant strain is detected that gives exceptional expected reward it is snapped forward in a moment of inspiration enough to make you jump out of your bath. This proves that we know how relatively good an idea is. We can tell instantly when we have a really good idea because the memory stick records how much better one idea is than another.

Poetry comes from this collective non-conscious place, as you struggle to find a rhyme you tweak the very corners of your non-conscious mind and the truth pops out on the page. While the struggle to find an innovative idea can consume an individual but the boom of that one creative

idea from nowhere holds the power to change the world we see and the voice we hear.

Humour

Why do we laugh? Because it prevents us from crying? Well no, we even cry in the best moments of laughter.

Unlearning is painful, it leads to dissatisfaction and laughing it off is better than crying sometimes. Our emotions are social. They are social so we can learn from each other. Laughing together lets us throw off this dissatisfaction collectively.

But the deeper reason for laughter is psychosis detection. Reality is consensus, when we laugh together we share our reality with others. I am assuming in the forests in prehistory we used to mess about with drugs a lot. And anyway life didn't used to be so sterile and controlled and more people I imagine got into psychosis. Under extreme exhaustion anyone has the capacity to enter psychosis.

Here's an image illustrating a scenario in WW2:

You have marched 90 days and nights from the bottom of camp to the top and back. In the meantime you just fought a battle. Now you are camped near a station known. You are with your mates from the village. You sit cold and wet round a fire. You pull out the veggies and the meat along with bread out of your bags you "requisitioned" from the local town. Then James lets out one of his legendary loud and stinky farts. James smiles and says "oh windy pops" and everyone cracks out laughing, except Daniel. He still stares into the fire. Everyone looks at each other. People pack up for the night and Daniel, a giant of a man, starts laughing to himself into the fire. What do you with Daniel?

Do you sneak off in the morning and leave him? – No he is likely to kill himself

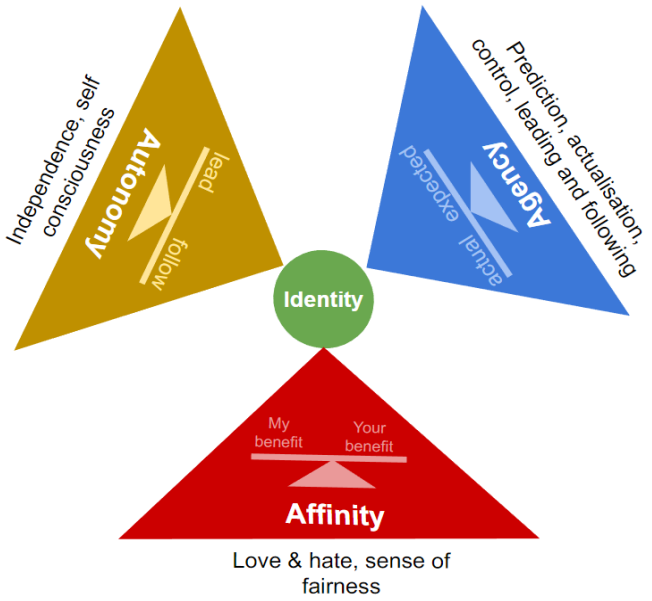
Do leave him behind the lines? No he is likely to explode and kill you

Do you push him to the front of the battle line – Yes

In the battle Paul is killed, but Daniel has come to his senses and starts booming orders to split the forces to reform on the adjacent hill. He is hypomanic but compos mentis again.

Conclusion

Neural balances theory uncovers the underlying logic that exists in emotional life. It shows the inherent order that is to our emotional being that rationalists try to deny.



The three main balance calculations determine our need for agency, affinity and autonomy.

1. Actual emotional profit versus Expected emotional profit - agency
2. My benefit versus your benefit in a cooperation - affinity
3. Leadership versus following and the avoidance there of - autonomy

We are each unique in the many possible ways these three balances come to be expressed. Some of us are more controlling, strongly seeking self actualisation. Others have a strong sense of equality and love. Still others seek independence and rationality over the drive to social or hierarchical living. A fourth set has these drives confused in their non-conscious and have a tendency to neurosis. Their identity is not clear.

The therapeutic outcomes of this research is to see many so called illnesses as emotional states be that: hypomania, depression or anxiety. By far the most important role of the therapists is to facilitate the individual in finding faith be that in God or humanity or just simply gardening, as without faith the human psyche is vulnerable. The

fact is that humans are inherently unstable creatures based on optimisation algorithms rather than habits. Faith, family and friendship are vital to our wellbeing. Therapy and society would do well to cultivate these values.