

A Brief Outline of the Evolutionary Approach for Compassion Focused Therapy

Paul Gilbert*

Centre for Compassion Research and Training, University of Derby, College of Health and Social Care Research Centre, Derby, UK

***Corresponding Author:** Paul Gilbert, Centre for Compassion Research and Training, University of Derby, College of Health and Social Care Research Centre, Derby, UK.

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Abstract

Humans are evolved animals set up to pursue various life tasks. This gives rise to different phenotypes some of which are conducive to well-being, while others are not. Compassion focused therapy seeks to harness the evolved importance of affiliative and caring motivational processing to help alleviate individuals who are caught in high levels of shame and self-criticism and consequent depression and anxiety. This paper will outline the basic theoretical stance of CFT and some of its therapeutic interventions.

Keywords: *Evolutionary; Compassion Focused Therapy*

A Brief Outline of Compassion Focused Therapy

It is well known that there are many psychotherapies, with different histories, often rooted in the observations and theoretical and philosophical orientations of particular individuals [1]. More recent developments in psychotherapy have become very focused on evidence of effectiveness in different therapies, in different contexts, for different people [2]. However, it is important that we have not only evidence of outcomes but evidence of the processes by which psychotherapy attributes its causal and restorative processes [3]. Compassion focused therapy (CFT) is rooted in an attempt to locate the understanding of mental health problems and its relief, in an understanding of evolved brain processes and evolutionary functions [4-12]. There is an increasing recognition that to develop our understanding of psychopathology and improve our therapies we need better insights into the nature of the brain, how it is designed, what it was designed to do and the physiological infrastructures that provide the basis for motivation, emotion cognition and behaviour [13]. Moreover, that some of what we call psychopathology are normal and natural reactions to particular kinds of environments. For example, individuals who grow up in hostile threatening environments tend to develop more defensive and threat focused phenotypes that give rise to specific ways of seeing and responding to the world. These can manifest in particular physiological architectures (e.g., operation of the hypothalamic-pituitary adrenal axis stress system) and in symptom arrays that can be classified in terms of internalised depression and anxiety types of difficulties or as externalised aggressive narcissistic and antisocial disorders. This is linked to what is called a 'life history approach', where different environments recruit different strategies for fast risky living versus slower safer living and reproducing [4,13-15].

Compassion focused therapy has three basic strands:

1. Seeking to understand the emergence of mental health difficulties as a result of genetic, archetypal, and environmental interactions they give rise to certain phenotypes
2. Seeking to understand the emergence of mammalian caring behaviour that has had such a profound effect on subsequent evolution, and the social choreography of motivation and emotion, particularly for humans.

3. How to recruit brain systems that were evolved for affiliative and cooperative relating, and therefore to create positive engagement (rather than threat 'avoidance or attack') with others and internal positive and soothing affects, as a potent therapeutic process.

The Archetypal Mind

It is now well accepted that the human mind is the product of evolution and emerged out of the mammalian and then primate line. About 2 million years ago our prehuman ancestors began to evolve a particular kind of brain enabling a major development of social intelligence competencies [16]. Here was a mind that developed complex oral (and very recently written) languages and with it came symbol use, abilities to have a sense of self as object, and thus be able to self-monitor in self-aware ways, enabling self-conscious emotions such as pride and shame; a mind able to reason, anticipate and plan, develop complex empathic awareness; a mind that could use imagery on purpose to run complex scenarios of possibilities in one's head. We have a form of knowing awareness that no other animal has. However, these competencies are situated in a mind and brain that has been designed for genetic survival and reproduction and therefore a series of life tasks, underpinned by motives and emotions. So, like our animal cousins we are (for example) motivated to avoid harm, injury and disease to seek out certain types of food, to form attachments when we are young, to develop peer group (close alliances/friends) and tribal relations (group belonging) as we age and to compete for status and sexual opportunities. There is therefore general agreement that the undercurrent of human behaviour are still guided by our archetypal minds [6,12,17,18] (rooted in evolved strategies [11,13].

These archetypal minds in turn are guided by genes, but genetic expression is complex and socially niche sensitive. In other words, the backgrounds and current environments we live in can have a major impact on genetic expression through a process called methylation [14,19]. This in turn means different phenotypes are expressed in different social conditions. Different phenotypes arising from different social contexts organise and choreograph our (gene influenced) archetypal potentials in different ways.

Two of the big phenotypic orientations to life are linked to whether phenotypes are mature and thus are orientated for high threat, unstable social environment or a stable low threat, safe environments. In the latter, the core qualities of mind are to develop our social affiliation, social trust and cooperation. Considerable evidence now suggests that growing up in support of caring environments have major impacts on the regulation of a whole range of physiological processes including- the immune system, cardiovascular system, and as noted, even genetic expression. In other words, you're more likely to be trusting, open, able to develop reliable relationships with high levels of mental well-being and be more self-liking if you grow up in a safe, high investing, caring loving environment than if you grow up in a neglectful and abusive one. In neglectful and abusive environments, the more adaptive phenotypes enable you to be more mistrusting, socially cautious, threat sensitive, and at times (more) exploitative and manipulative. And the more competitive your experience of your environment is, the more self-monitoring, shame-prone and self-critical you may be [3]. So, archetypes evolved motivation and emotional systems and their phenotypes, are linked to social contexts with some being more conducive to morality, social security and well-being than others.

The insight that we are constructed by genes, to conduct life tasks, choreographed and myelinated by social experience gives rise to important aspects of compassion focused psychoeducation in therapy. This aids insight and recognition that much of what goes on in our mind, including our emotions, impulses and motives are biologically created and therefore in that sense are 'not our fault'. Indeed, we use the analogy that if the therapist had been kidnapped as a three-day-old baby into a violent drug gang family, then their genetic expression and very sense of themselves would be totally different than if they'd continued to grow in a loving and caring family. So, in a sense we are all versions of our own particular genetic combination, recognising that our particular genetic combination is also only a version of what could have been had our parents mated at a different time. And we are socially choreographed by the social niche is in which we grow and live. This education helps clients to begin to dis-identify and defuse from an over identification with the contents of mind and shift do a more insightful and enlightened taking responsibility for the behaviours. So, the more we give up blaming and shaming and overly fusing

a sense of self, for good or bad, with the contents of mind, the more we are able to learn how to 'steer and drive' the mind that nature and social context have given us. The idea of courses to learn how to work with (and drive and steer the behaviours of) our minds in ways that is conducive to the well-being of self and others and certainly not harmful. Indeed, in some ways developing insight into the nature of our minds and learning how to develop moral and ethical orientation to life is essential feature of many therapies.

So, compassion focused therapy is rooted in evolutionary functional analysis and highlights that there are a finite set of motivational systems guided by three basic emotional functional systems. Evolutionary functional analysis of the emotion suggests the three big functions are the following:

- 1. Threat and Defence:** All brains are designed to defend and protect themselves and the bodies that carry them. So, evolution has built into organisms capacities for self-defence. These capacities involve activating bodily processes and behavioural repertoires. Three major ones are linked to: anger/fight, anxiety/flight, disgust/expel. Collectively these can be regarded as threat system emotions. They are easy to condition and they are designed to come on quickly and to even knockout positive emotions. So, for example, if one is enjoying life walking in the jungle but hears the sound of a lion nearby that enjoyment system needs to be inhibited and anxiety take over. It is well known that various sensitivities in threat system processing underpins a lot of psychopathology [4].
- 2. Acquisition and Achievement:** All brains need to be able to acquire the resources that are necessary for survival and reproduction. In the first instance this is food but also opportunities for different forms of relating. With social evolution, acquired resources include positive relations with others. The evolutionary consequences are that we have a range of emotions that are linked to rewards, the acquisition and the maintenance of resources that are conducive to survival and reproduction. These emotions are linked to feelings of drive, excitement, joyfulness and various forms of pleasure. However, these kinds of pleasures tend to be short lived and to maintain individuals in an overly acquiring frame mind particularly in modern societies which are very different from hunter gatherer societies where sharing was crucial. Distortions of the drive system underpinned problems such as the enormous resource variation between rich and poor and the ease by which we become addicted and engage in repetitive behaviours.
- 3. Rest and Digest:** Being in states of threat processing of fighting avoiding or expelling, or engaging in acquiring resources will be hello I can see how you quickly utilise energy. Consequently, evolution has equipped us with a range of physiological processes that enable the body to calm down and literally 'rest and digest'. A whole range of physiological processes are linked to rest and digest including growth hormone, the HPA system and various body repair systems. For the most part emotions associated here are ones of satisfaction, contentment soothing and feeling safe. One is not in a threat position nor in a seeking wanting or needing position. We now know that the parasympathetic system and the role of heart rate variability is very important for the rest and digest emotions.

These functional regulation emotional systems are obviously rooted in complex (neuro) physiological systems that are constantly co-regulating each other. For example, as the need to eat increases so does the preparedness to engage in threatening environment to find food may also increase. Some excitement states require some degree of fear. Feeling safe may also enable us to explore our environments or even take risks because we sense there is the safe place for us to return to perhaps. So, these systems are co-regulating [10]. What's important however is that some clients get caught up primarily in the threat processing emotion systems and are therefore plagued by the physiological patterns and psychological preoccupations of threat processing [20].

Evolution, motivation and social mentalities

Evolution gives rise to evolve strategies for survival and reproduction. These range from harm avoidance such as being able to spot predators and have ways of escaping or hiding, ways to attract potential mates, ways of caring for offspring ways of coping with hierar-

chical dominant subordinate relationships and ways of recognising and engaging with group variation. Importantly social motives are require co-evolution of the motive. For example, attachment and caring relations could not evolve unless adaptations were occurring in the apparent and the receiver of the care, the infant at more or less the same time. The same for sexual relationships; they are dependent on complex communications between the genders that result in copulation. If these communications do not work well there are consequences. For example, if the parent doesn't notice or respond to the infants distress that can be seriously infant and equally if a potential sexual partner does not respond to a sexual signal then copulation is unlikely to take place.

Social motives operating via reciprocal dynamic patterning of interactions through coordinated social communications, rooted specific motivations of the actors involved have been called a social mentality [6,16]. Competitive motives and social mentalities have their unique signatures of social signalling which stimulate unique patterns physiological activation and communicative displays. For example, some individuals will express aggressive and dominant behaviours to which others will respond with submissive behaviours and displays; following the winning or losing of the social encounter there may be physiological changes such as in cortisol testosterone and 5-HT (Gilbert, 2000). Caring and compassion can therefore be seen as a social mentality [6].

The evolution of caring behaviour and compassionate intention

Caring is obviously one of the motivational systems that create safe and stable environments - especially for the young. However, the ability of the parent to provide this can also be dependent on the environment the parents themselves are in. The details of the evolution of caring behaviour (linked to kin and reciprocal altruism) are beyond the bounds of this paper. However, it is now well known that the evolution of attachment and infant care and investment evolved as major reproductive strategies in mammals [4,21] and supported the evolution of a range of physiological processes by which infant and parent, co-regulate each other [22,23]. Two obvious processes were the involvement of oxytocin in caring [24] and the development of the myelinated vagus nerve [25,26].

Compassion is rooted in caring motivation. What distinguishes compassion from straight caring is the fact that humans are able to use their social intelligence and knowing awareness to direct caring behaviour in new ways [16]. Although there are various definitions of compassion [27] in most of the ancient contemplative traditions it is seen as a motivation [28]. Compassion can typically be seen then as: a sensitivity to suffering in self and others with a commitment to try to alleviate and prevent it. This opens to 2 basic psychologies. The first relates to our abilities to turn towards suffering as opposed to away from it, deny justify it or even cause it. Interestingly outside akin relationships distress and disease signals often are alarming to other conspecifics who will then avoid a colleague. The second psychology of compassion is specifically human because it is the preparedness to commit oneself to develop the skills to address suffering. While many animals can be helpful to each other they're not able to try to intentionally acquire skills with in the intention of being helpful to others. This is central to humanity though and this motivational system has a range of impacts on psychological and physiological systems not to mention social behaviour [29].

Indeed, there is good evidence that over a million years ago humans were caring for diseased and injured relatives in ways that no other animal does (Spikins, 2017). In addition, much of human evolution were in small bands and groups that were mutually supportive and were reciprocation was key to their survival. Indeed because of how the human birth canal evolved without right walking human females have the most painful and dangerous of all births and often need help. Humans are the only species that will allow other females and indeed encourage other females to hold and care for their babies [30]. Right from birth then, babies would be hearing multiple voices and seeing multiple facial expressions, commonly of smiling and friendliness. Hence, it's not just parental attachment that is central to the evolution of caring in humans but being located within a caring network. To some extent medical practices that isolate females for birthing are breaking across this important dynamic for both baby and mother, as our modern living styles such as modern estates where parents can be isolated from support groups [30]. Indeed, there is now considerable evidence that social isolation and disconnection underpin a lot of social misery. Importantly, however, evidence is also pointing to the importance of early friendships, networking and peer group relationships as powerful regulators of strategies and phenotypes [19].

Essentially then caring, and our capacity for compassion (purposely and knowingly working out how best to care for others) have profound effects on a whole range of physiological and psychological processes. Importantly, caring and compassion can be understood as flows in that there is the compassion we can have for others, the compassion we can experience and be open to from others and those how we can treat our own minds and bodies with compassion. In a test of social mentality theory Hermanto & Zuroff [31] showed how the different orientations of compassion are related. High caregiving along with the ability to receive care predicted self-compassion, whereas high care-giving with low care seeking (being less open and receptive to compassion) predicted poor self-compassion. Hermanto, Zuroff, Kopala-Sibley, Kelly, Matos & Gilbert [32] also found that being open to the compassion from others buffers the effect of self-criticism on depression. Similarly, Gilbert, *et al.* [33] also found that fears of receiving compassion were strongly associated with fears and resistances to being self-compassionate, but much less so to being compassionate to others. Such data highlights the fact that to understand how compassion manifests in the world requires a focus on both competencies for giving but also receiving; that is compassion as a social mentality.

However, caring - compassion is only one of a number of motivational systems that can organise our minds and choreograph our sense of self. Humans also have to compete for social in sexual/reproductive resources and social place. This competition becomes more acute in environments that are resource unstable and/all or threatening. We therefore have a range of phenotypes that choreograph the brain for these environments. Here individuals have to be either very self-monitoring, with preparations to make submissive manoeuvres when socially threatened, or be prepared for aggressive regulation of conspecifics [6].

In essence CFT seeks to map the different motivational systems that can choreograph the mind and to harness the regulating, soothing and encouraging qualities of care, investment, and compassionate motivational processing. Hence, therapy focuses on the psychoeducation and the archetypal mind, and the psychological and physiological value of cultivating compassion motivation systems within oneself and acting from that position, particularly in the face of life challenges.

Compassion is important for another reason though because it organises our three emotion processing systems in unique ways. For example, if a child is distressed and returns to the parent for competent soothing, it is the stroking soft voice tones and reassurance the parent that stimulates the soothing system, and is linked to the rest and digest system and that enables the child to calm down. Basically, caring in this supports the balance of the sympathetic parasympathetic system that is conducive to a sense of safeness and well-being, which provide the context for affiliative sociality [34]. So, caring signals profoundly affect the organisation of our evolved emotion regulating systems and the absence of signals of caring can do the same. So, for example, if a parent becomes inaccessible to a child (separation) that can be a major trigger to the threat system that creates tearful and anxious searching.

Compassion focused therapy

It is well known that individuals vulnerable to psychopathology can struggle with the flow of compassion in a number of ways [35-37]. These 'flows of compassion' are interdependent. In a test of social mentality theory, Hermanto, Zuroff, Kopala-Sibley, Kelly, Matos & Gilbert [32] showed how the different orientations of compassion are related. High caregiving along with the ability to receive care predicted self-compassion, whereas high care-giving with low care seeking (being less open and receptive to compassion) predicted poor self-compassion. This fits with Bowlby's notions of compulsive caregiving and also that caregiving can be defensive and submissive [38]. Gilbert, *et al.* [33] also found that fears of receiving compassion were strongly associated with fears and resistances to being self-compassionate, but much less so to being compassionate to others. Hermanto and Zuroff [31] also found that being open to the compassion from others buffers the effect of self-criticism on depression. Such data highlights the fact that to understand how compassion manifests in the world we need to focus on both competencies for giving but also receiving; compassion as a social mentality.

Individuals with more externalising disorders can be very uncaring and hostile to others particularly those who have a more socio-pathic and narcissistic orientation to life. These individuals less commonly come to therapy however; but can promote themselves and their compassionless destructiveness in the higher echelons of politics and business [39]. More common are individuals who have an internalising condition. These individuals may be relatively empathic and caring to others although sometimes manipulatively so - that is they are caring primarily in order to be liked and accepted [38]. However, even people who are compassionate to others, those vulnerable to mental health problems can find it very difficult to feel socially connected, to be accepting of the compassion of others, or find themselves in social contexts where other people's compassion to them is absent for one reason or another. For example, there is considerable evidence that individuals who grow up or live within hostile or high expressed emotion families and groups can suffer a range of phenotypic linked depressions and anxieties [19]. So, there can be many fierce blocks and resistances to compassion. These can relate to the natural evolved boundaries around caring and compassion (for example it is easier to be compassionate to kin, friends and people we know and like than non-kin, people we don't know and people we dislike). Fears, blocks and resistances can also be linked to social context [35].

One of the common sets of difficulties that arrive in the clinic are people who have high levels of shame and self-criticism [7,40,41]. These individuals suffer from two major difficulties. First, humans evolved to be regulated through social relationships, particularly in small group and require a sense of connection [42] whereas, they often feel disconnected. The problem of shame means that they harbour fears that if they were known in any depth others will dislike them or reject them. Shame is probably one of the most important inner experiences for creating the sense of difference and disconnection from others. This is why most psychotherapists believe that the healing of shame is rooted in relationships particular ones that facilitate revelation and healing [40,41,43].

The second major problem is that shame and self-criticism sticks in the mind such that individuals are constantly stimulating physiological systems related to threat processing rather than the soothing qualities of caring and support [43]. It's important to help clients recognise that humans are quite capable of stimulating a whole range of physiological systems in their bodies and brains simply by what they imagine what they hold in the mind. For example, if one is hungry and sees a wonderful meal this can stimulate the hypothalamus to create stomach acids and saliva. But if one has no money and one just fantasises a meal the image can stimulate the same physiological pathways in the brain. Another obvious example is that if you see something sexual on television this will stimulate your pituitary and give you arousal. But you can of course lay in bed and just imagine something and do the same thing; that is on purpose using inner imagery, stimulate a specific set of cells and pathways in the brain to generate a specific hormonal cascade in the body. It is important therefore for client and therapist to recognise that what we hold in the mind stimulates physiological systems.

With this insight, it is relatively straightforward to help clients recognise that if there are people outside of ourselves that are, or have been, hostile and critical to us, this will stimulate our threat systems and their bodily processes. But we can also create in the mind by remembering hostile encounters from others, and/or by becoming self-critical. In fact, there is now very good evidence that self-criticism is very similar in the brain to external criticism [44].

One of the therapeutic targets therefore is to help people switch these physiological systems, moving from shame-based self-critical systems that will undermine positive emotion, to more compassionate and caring systems. This is because shame-based self-criticism in contrast to compassionate self-correction stimulates the brain in completely different ways [44]. So, just as we can imagine someone being critical to us which would then activate our defences, so we can also imagine somebody being very kind and supportive to us which will stimulate a different set of pathways. Part of CFT is therefore helping clients understand this process and learning how to mindfully notice shame-based self-criticism and switch into compassion based refocusing. In addition, CFT focuses on helping individuals to develop a sense and identity of themselves as a compassionate self or being, reflecting on the qualities that they would ideally have, and how by orientating themselves to live through this sense of self they may have better well-being [43].

As aids to the development of these compassion based motivations and imagery practices CFT deliberately tries to stimulate the parasympathetic system and the vagus nerve through breathing exercises of around five breaths per minute. This helps to teach clients how to ground themselves in the body and gives stimulus to the parasympathetic system and soothing system. There is increasing evidence that by stimulating the systems one can also help people have more activation frontal cortex which will support their coping.

Finally, CFT is contextualised within an evolutionary psychoeducational framework. So, clients are offered insight into how the human brain evolved in such a way that it is tricky. It is full of complex trade-offs such that although we have a newly evolved complex, thinking mind, this thinking mind is not disconnected from more basic motives and emotions. Indeed, these often recruit thinking processes for good or for ill. It is very easy for us to get caught up in rumination, worse case anticipations, shame-based reflections and hostile self-criticism which drive our threat systems in one way or another. And it is very easy for us to get into tribalism and tribal vengeance which can lead us to do very nasty things indeed. Hence, CFT sees the human brain as highly problematic because of the way it has evolved with a whole range of constraints and trade-offs that make us very vulnerable to mental health problems on the one hand and cruel and hostile on the other. CFT and compassion my training sinks to operate as insights and antidotes to those harmful tendencies within us.

Summary of interventions

Some of the key interventions for CFT include:

1. CFT uses an evolutionary-based functional analysis for psychoeducation into the complex nature of the brain, and in particularly the trade-offs that give rise to dysfunctional loops between recently evolved cognitive competencies and older motivational and emotional systems. Individuals also focus on the fact that they are gene built and socially choreographed, with the obvious implication that much what goes on in the mind is not our fault. Evolution is now also articulating the role that growing up in certain social niches have on fast versus slow living strategies they give rise to different vulnerabilities to mental health problems and antisocial orientations to life. This is used to then generate motivational shifting such that individuals seek to gain more control over their behaviours and orientations of the world -- we may not be to blame for what arises and some of the contents of our minds but we are responsible for our behaviour.
2. CFT discusses the different types of emotion regulation system and in particular different types a positive affect, distinguishing between activating deactivating emotions, the role of the rest and digest system and it's linked to part of a social affiliation soothing system. These emotions can then be tapped through the affiliative focusing.
3. There are many specific interventions that involve using body to calm the mind such as breathing and grounding techniques, use of body posture and movement development of body and emotion in the body awareness.
4. Using a variety of meditative fantasy and acting techniques to harness and engage with the inner representations of once compassionate self and compassionate other
5. Once the compassionate self as and intention for how one wants to be an act it is harnessed and becomes an orientation living this can, used to engage with psychological difficulties such as complex self-criticism shame or trauma or life dilemmas. It becomes possible for us then to step into a sense of the compassionate self and consider: compassionate motivation desires and wishes; compassionate reasoning thinking and reflecting; compassionate feeling; compassion behaviour. Each of these four domains of logical functioning can be orientated via compassion intentionality.
6. As for any motivation there can be fears, blocks and resistances to compassion. These are often crucial to the therapeutic work [43].

7. To date, evidence for compassion based therapies are growing [1] and particularly important is the way they are integrated into standard therapies and approaches Dearing [43,45-50].

Conclusion

This paper has briefly articulated an evolutionary orientation to compassion focused therapy. It is important that new developments in psychotherapy can route themselves in the science of mind and in particular the evolutionary functional analysis of brain processing systems. Although the way compassionate and affiliative relationships have always been seen central to therapy in the therapeutic relationships, recent developments in therapy have shown that these can also be trained and people can be given various exercises to practice. Currently, work is underway to explore in detail the physiological and psychological changes they can emerge with practice and the degree to which they are stable over time.

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