The Administration of the Flesh

The discourse of self-improvement and neuroplasticity

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Abstract

This study looks at the discourse of four books that use neuroplasticity as a basis for their project of self-improvement. By using the genealogical techniques developed by Michel Foucault this study focuses upon the process of subjectivization and the techniques employed by the discourse. In particular it focuses upon the relationship between the mind and brain that is formed by the discourse.

Keywords

Michel Foucault, neuroplasticity, neuroscience, cultural critique, discourse, governmentality, Catherine Malabou, Kant, mindfulness.
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Rembrandt, The Slaughtered Ox, 1655.
1 Introduction

The mind isn’t made of soft wax. It’s a reactive substance.

Michel Foucault, The masked philosopher (2000:325)

Neuroplasticity

In You Are Not Your Brain Neuroplasticity is described as having its roots in the Greek word plastikos meaning "formed" or "molded" (2011:36). The book goes on to state that “neuroplasticity includes any process that results in a change in the brain’s structure, circuits, chemical composition, or functions in response to changes in the brain’s environment. It is a property of the brain and is best understood as a capacity (or potential) for brain areas and circuits to take on new roles and functions.” (2011:36). These changes in the brain can take the form of both passive and active transformations, they can be passive in the sense that stimuli can result in the formation of habits and active in the sense that individuals can attempt to form new habits and break down old ones. In a certain respect the action of self modelling can said to be something of a dice-throw, one can never tell what the final effects will be of an intervention in the habitual practices of the individual, what new habits will be formed from the attempts to transform old habits.

In the self-improvement books that form the basis for this study neuroplasticity is enlisted in a project of self-improvement that aims at a happier and healthier lifestyle. The self-improvement books make the distinction between mind and brain, referring to the brain as the passive and organic receiver of stimuli that reacts instinctively and the mind as the analytical source of reason which is able to sculpt the organic material of the brain according to its own design. The self-improvement books in this study lay out a series of practices by which the mind can correct or discipline the brain and transform it according to the ideals described by the discourse itself. The discourse can be said to possess a certain kind of productive power in that it creates both the object to be transformed, the aim of the transformation and the position of the subject. It is the productive power of the discourse of self-improvement and the relationships created by it that are the focus of this study.
Habits and subjectivity as the background to neuroplasticity

In many respects the problems of knowing the nature of neuroplasticity can said to be built upon the problems of knowing the nature of habits, which in turn have a direct relation to the problems of knowing the nature of the subject. Each historical discourse upon the nature of habits can be said to link directly to a conception of what it means to be a subject. In ancient Greece we can see the discussion of the active and passive attributes of habits, such as the danger of being influenced passively in Plato’s conception of the immoral arts in *The Republic* (2007:335-353) [circa 380BC]. We also find the idea of the state actively forming the habits of their subjects for their own good in Aristotle’s *Nicomachean Ethics* (2009:23) [circa 330BC]. The passivity of habit is linked into a discourse of potentiality, an ability to be transformed and to transform oneself. This duality of habit that can result in both beneficial and detrimental effects for the individual leads to a discourse upon the ethics and aesthetics of habit in order to master its dangers and harness its potentiality.

This relation between habits and subjectivity continues in the form of the discourse on customs in Locke’s *An Essay Concerning Human Understanding* (2008) [1690] and Hume’s *An Enquiry Concerning Human Understanding* (2008) [1748], habit there takes the form of the nature of thinking itself as the *customs* of causal inference, yet is also referred to in the form of the *customs* of a culture. It is there that we see the development of certain long lasting debates about the relation between the biological and the cultural and the mind and the body. We can trace further lines, further debates upon habits and notions of the subject, through Maine de Biran’s *The Influence of Habit on the Faculty of Thinking* (1970) [1803] and Ravaission’s *On Habit* (2008) [1838] and their construction of the human in relation to its biology and descriptions of habit’s relationship with memory. We can go on from there through Kant’s *Critique of Pure Reason* (2007) [1787] and Husserl’s *Analyses Concerning Passive and Active Synthesis: Lectures on Transcendental Logic* (2001) [1926] with their analyses of the habits of reasoning and beliefs. From there we can trace lines onward to Heidegger and his description of habits as skills and practices in the everyday activities of beings in *Being and Time* (2010) [1927].

In more recent times we have seen an intertwining of the paths of neuroscience and philosophy and the discourse on habit formation, perhaps best seen in the works of Paul Churchland, Catherine Malabou and Thomas Metzinger. Outside of the philosophical discourse we can also trace lines of theological and psychological thinking upon habit and the nature of the subject. In Christianity we have the discourse upon the nature of sinful habits
and the power of rituals as a technology to transform habits. In Freudian psychology we have the discourse upon the compulsion to repeat and the theory of the drives. Habit becomes linked to a kind of automatism and mortification, almost as if it were an alien presence within the active subject.

It seems possible to say that we can hermeneutically deduct a model of subjectivity from the discourse on neuroplasticity in the self-improvement books. This model seems to describe how bad habits belong to the brain and form a neurological material from which the mind can distance itself and to a certain extent free itself. The ideal then, the telos of the discourse, forms something like a mind emancipated from bad habits, a mind which operates and administers habits and is flexible and free to adapt itself. The mind corrects and reforms the brain habits according to a rational and positive ideal. For this model the habits of the subject should originate within the mind rather than within biological passivity. This model can perhaps in some ways be seen as being less extreme, or more liberal than a discourse which seeks the complete eradication of bad habits. The discourse of self-improvement and neuroplasticity accepts that there are always some bad habits, and that these habits should be allowed to exist. One could also say that they seem to form the material that allows the mindful subject to manifest itself as the observer by way of its refusal to identify with them.

This relation of disavowal or refusal of engagement means that the new subject is one that only exists in relation to that which it rejects; its strength or potency resides in its power of refusal. What this model of subjectivity demonstrates is a kind of competition between the rational mind and the natural instincts for the rights to govern over the impressionable surface of the plastic brain. The project of self-improvement within the discourse of neuroplasticity can be seen as an attempt to transcend biology by using the knowledge contained within the scientific discourse of neuroscience.

**Research background – the possibilities of critique**

Although this study was written for the department of ethnology, it was also written as part of a master’s program in aesthetics where the emphasis was on the possibilities of critical thinking. In terms of critique I have followed Foucault’s definition of critique in his lecture *What is Critique* (2007) [1978] where he states that:

> If governmentalization is indeed this movement through which individuals are subjugated in the reality of a social practice through mechanisms of power that adhere to a truth, well, then! I will say that critique is the movement by which the subject gives himself the right to question truth on its effects of
Foucault’s position resembles the lines of thinking in Kant’s essay *What is Enlightenment* (2007:29-39) [1784] where Kant takes up the private and public uses of reason, the private use applies to those in official positions using their reason in line with their position in a network of power, such as the civil servant’s use of reason in the performance of their work. The public use of reason represents the less dogmatic use of reason that operates at a distance from the official networks of power. One can move from the private to the public realm only by disavowing the power that one gains by subjecting oneself to the truth. By this I mean that in order to use one’s reason freely one must give up the claim of speaking from the position of power and knowledge. My study is not a critique of the logic of the discourse, an analysis of whether what the discourse says about the brain and the self is true or reasonable according to particular norms and models. Nor is it an attempt to say what one should or should not believe, my study is concerned with the way in which discourse prepares the position for the subject and how separate discourses are brought together to gather around an object in order to transform it.

I have also been influenced by Bruno Latour’s concept of critique in his essay *Why Has Critique Run out of Steam?* (2004) where he states that:

> The critic is not the one who debunks, but the one who assembles. The critic is not the one who lifts the rugs from under the feet of the naïve believers, but the one who offers the participants arenas in which to gather. The critic is not the one who alternates haphazardly between antifetishism and positivism like the drunk iconoclast drawn by Goya, but the one for whom, if something is constructed, then it means it is fragile and thus in great need of care and caution. (2004:246)

Although Foucault’s emphasis was always on the historical aspect of genealogy as the study of a process of emergence, my genealogy functions in the present day, across a horizon which is very much present rather than submerged in the past. In adapting the notion of genealogy to the present day I have switched the focus from descendents to relations, although I have attempted to give some hints of how this discourse may open up onto the past. In this way we can see the way in which my use of genealogy intersects with Latour’s notion of an assemblage of relations.

**Material**

The self-improvement books based upon the notion of neuroplasticity that are used in this study are Rick Hanson and Richard Mendius’ *Buddha’s Brain – The practical neuroscience of...*
happiness, love and wisdom (2009), John B. Arden’s Rewire Your Brain (2010), Jeffrey M Schwartz and Rebecca Gladding’s You Are Not Your Brain – The four step solution for changing bad habits, ending unhealthy thinking, and taking control of your life (2011) and Rhena Branch and Rob Wilson’s Cognitive Behavioural Therapy for Dummies (2007). The self-improvement books were selected due to their popularity, but also in a way in which it is hoped that the books offer a certain amount of variation in their approaches by having a different focus.

Rick Hanson and Richard Mendius’ Buddha’s Brain (2009) attempts to integrate Buddhist teachings into its discourse, and both of the authors have a background in neurology and “contemplative wisdom”. The book itself has a simple layout with numerous diagrams of the brain and repeatedly summarises the content by using numbered lists and bullet points. The publishing house from which it comes has a wide variety of books combining mindfulness and self-improvement such as mindfulness and diet and mindfulness and exercise. John B. Arden’s Rewire Your Brain (2010) relies more heavily on scientific terminology and rather than the picture of a Buddha that we see on the cover of Buddha’s Brain (2009) it has a brain depicted as a mass of wires on the cover. The book relies greatly on examples of patients encountered by the author in his work as a doctor. Although it has a very similar style to Buddha’s Brain (2009), the book includes no diagrams of the brain and features instead long descriptions of the different neural processes. The book also features a large number of tables with nutritional information for maximising the brain’s performance.

Jeffrey M Schwartz and Rebecca Gladding’s You Are Not Your Brain (2011) makes the clearest distinction between mind and brain and uses highly negative language when referring to the habits of the brain. Like CBT for Dummies (2007) it features a variety of tables for the reader to fill in. It also frequently summarises and offers clarification for the terminology that it uses. Of all the books in this study it seems that this one has had most exposure on television, it even has its own website¹. Rhena Branch and Rob Wilson’s CBT for Dummies aligns itself with the discourse of cognitive behavioural therapy rather than Buddhism or neuroscience. Like other books in the ...for Dummies series it has the appearance of a workbook and is mostly made up of forms and charts that are to be filled in by the reader. It also features numerous diagrams and lists to present the data about behaviour. Before each chart there is an example that shows the reader how they should compose their answer. Of all the books in this study, this is the only one that is not written by qualified doctors, although

¹ http://www.youarenotyourbrain.com/
they are both qualified therapist. In my analyses I’ve looked for the ways in which the books differ from each other in terms of their emphasis and practices. In the conclusion I return to the elements that unite the books into a single discourse.

Methodology

Although Foucault has been widely used in ethnology for quite some time, that usage has in most cases focused upon his earlier works such as; History of Madness (2009a) [1961], The Birth of the Clinic (2003) [1963] and Discipline and Punish [1975]. This can be seen in the work of ethnologists such as Helena Hörnfeldt in her Prima barn, helt u.a.: normalisering och utvecklingstänkande i svensk barnhälsovård 1923-2007 (2009) and Fredrik Hertzberg in his Grärotsbyråkrati och normativ svenskhet: hur arbetsförmedlare förstår en etniskt segregerad arbetsmarknad (2003). This concentration tends to neglect the shift in Foucault’s focus after the publication of the first volume of the History of Sexuality (1998) [1976]. Foucault’s work after that point shows a movement away from ideas about domination, normalisation and his methodology of archaeology towards more fluid notions of reciprocal processes, relations and the methodology of genealogy.

Following Foucault’s notion of genealogy in his later works this paper looks not for the origins or essence of the subject but for the relations into which it enters and by which it is produced. In doing so one must, as Foucault said, move sideways like a crawfish through the various discourses in order to document the way in which they produce and transform the position of the subject. Foucault’s methodology was in a constant state of flux throughout his work, at different points he gives varying descriptions of the focus, methodology and aims of his analyses. This paper attempts to piece together a methodology that remains as flexible as the various sources from which it is taken. The varying accounts that Foucault gives of his work enables these analyses to operate with a certain freedom that means that the methodology can more easily be made to adapt to material, changing its focus when the material demands it. I attempt to describe here some of the explanations of genealogy offered by Foucault, with a special focus upon his final lectures on the care of the self which is of particular significance for the discourse of self-improvement.

In his 1978 lecture Security, Territory, Population (2009) Foucault explains that the aim of his analyses is to shift to the outside or to go behind that which he wishes to examine. One of the ways in which he does this is by refusing to give himself a ready-made object (2009:118). For Foucault madness, criminality and sexuality do not exist, but this does not mean they are
nothing. By detaching the objects of his studies from their privileged statuses as objects and resituated them within the perspective of the “constitution of fields, domains and objects of knowledge” he enables himself to focus upon them as technologies. Foucault gives a further explanation of this in his 1979 lecture *The Birth of Biopolitics* (2010):

Instead of starting with universals as an obligatory grid of intelligibility for certain concrete practices, I would like to start with these concrete practices and, as it were, pass these universals through the grid of these practices...The method consisted in saying: Let’s suppose that madness does not exist. If we suppose that it does not exist, then what can history make of these different events and practices which are apparently organized around something which is supposed to be madness?  (2010:3)

It is in the interview *On the Genealogy of Ethics* (2000:253-280) [1983] that Foucault gives his most detailed account of how his genealogical interpretation operates, describing how genealogy concentrates on three domains:

First, a historical ontology of ourselves through which we constitute ourselves as subjects of knowledge; second, a historical ontology of ourselves in relation to a field of power through which we constitute ourselves as subjects acting on others; third, a historical ontology in relation to ethics through which we constitute ourselves as moral agents.  (2000:262)

This paper looks mainly at the role of knowledge and ethics in the discourse of self-improvement and neuroplasticity, firstly it looks at how neuroscientific data is used in the discourse and secondly it looks at how neuroplasticity is used in a project of emancipated reason.

In *On the Genealogy of Ethics* (2000) Foucault goes on to describe in detail the four main areas of the domain of ethics that form the focus of his work on the care of the self in his history of sexuality and final lectures. The four main areas which constitute what Foucault calls the relationship with the self in the constitution of the self as a moral agent are the ethical substance, the mode of subjectivation, the techne or practices involved and the telos or aims of the discourse. For Foucault this meant the aspects of the subject or their behaviour that would be focused on by the discourse. The same act could play a different part in a variety of ethical discourses, for instance a sexual act could be focused on in terms of the desires (are they filled with lust, are they filled with love?), thoughts (are they thinking of someone else? Are they just thinking of themselves?), pleasure (are they enjoying it, how much enjoyment are they getting?) or the relationship (are they married, are they related?). In some cases it might not matter who one made love with, as long as the thoughts were pure, in other cases the thoughts might not matter at all as long as the act itself was within moral boundaries. In terms of this discourse we see habits and emotions examined in terms of their rationality, if they are economical and if they will give long term gains rather than short term
aims. The mode of subjectivation is that of the rational subject, the mind being the seat of reason and logos that the discourse intertwines with scientific knowledge. The practices are those described within the methods of self-improvement described by the books that give the mind ascendancy over the irrational brain and the aims of the discourse is that mind should work in well-balanced co-operation with the regulated brain.

In the 1983 lectures *The Government of Self and Others* (2011) Foucault describes his work as the analysis of focal points of experience in which forms of a possible knowledge, normative frameworks of behaviour for individuals and potential modes of existence for possible subjects are linked together (2011:3). This study looks at each of the books on self-improvement individually and uses the triptych of discourses referred to by Foucault in his final lectures as veridiction, subjectivation and governmentality to examine the practices and positions within the discourse of self improvement. I make use here of Foucault’s notion of alethurgy, by focusing upon the emergence and manifestation of truth, rather than attempting to test truth claims against some external or transcendental standard.

In his seminar series *The Birth of Biopolitics* (2010) Foucault explains that his focus is not upon showing how these non-existent objects were produced by ideology or lack of reasoning:

...it was a matter of showing by what conjunctions a whole set of practices- from the moment they became coordinated with a regime of truth- was able to make what does not exist (madness, disease, delinquency, sexuality etcetera) nonetheless became something, something however that continues not to exist. That is to say, what I would like to show is not how an error- when I say that which does not exist becomes something, this does not mean showing how it was possible for an error to be constructed- or how an illusion could be born, but how a particular regime of truth, and therefore not an error, makes something that does not exist able to be something. It is not an illusion since it is precisely a set of practices, real practices, which established it and thus imperiously marks it out in reality. (2010:19)

It is this coordination of practices and a regime of truth that Foucault calls a *dispositif* (apparatus) of knowledge-power, a technology that produces the existent from the non-existent and divides it up into the true and the false.

Following Foucault, the starting point of this study is that the subject does not exist as an independent entity, which does not mean that it is nothing, but rather that it has a particular kind of being. It has a mode or kind of being which cannot be examined or tested by only using epistemological methods, to attempt to do so would result in something like the metaphysical analysis of the *daimon*, soul or psyche. An analysis of subjectivity can only be carried out as a kind of hermeneutics of the effects of discourse, the positions it creates, the
aims it attempts to carry out and the transformations that occur. In doing so, the aim is to attempt to avoid following the path of reductive critique that relies upon the notion of ideal forms that subsist over time. This analysis seeks to locate the points of emergence or intersections of discourses that produce objects and events as a process by focusing upon the modes and forms of being created by the reciprocal correlation of the various discourses.

It is precisely this analysis of a precarious position between being and non-being that makes the genealogical method interesting for ethnology, a discipline which has a long history of analysing cultural elements from the perspective of how they operate within a culture rather than what their status is as ontological entities. That is to say, it is not a matter of proving whether a ghost does or does not exist, nor is it a matter of describing the attributes of a ghost in the most correct manner, the matter at hand is the interpretation of the effects of the discourses in which the notions of ghosts operate as technologies of power and transformation.

In Foucault’s seminar *The Technologies of the Self* (2000:225) [1982] he describes governmentality as the encounter between the technologies of power “which determine the conduct of individuals and submit them to certain ends or domination, an objectivising of the subject” and the technologies of the self which:

...permit individuals to effect by their own means, or with the help of others, a certain number of operations on their own bodies and souls, thoughts, conduct, and way of being, so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection, or immortality.

(2000: 25)

This study examines the forms of governmentality that are to be found in these books on self-improvement by looking at the ways in which the brain becomes an “other” and is regulated by the mind.

The analysis of the discourse of self-improvement and neuroplasticity looks at the manner in which different aspects of the self are brought together in order to become the object which is to be transformed and the subject which transforms, one sculpts, the other is the sculpted. In many respects it might be said that it is the desire to improve oneself, to make free use of one’s reason upon oneself, which creates a split within the self between the passive and the active. Through the discourse in the self improvement books certain practices will be characterised as belonging to the brain and being passive while others are seen to belong to the logos or ratio of mind and are described as active practices. The passive practices are relegated to the biological and take the form of a kind of non-subject or standing reserve for the mind. These practices become aspects of the individual that must become subjected to
discipline and correction in order to be included within the active subject. One might refer to this as a kind of cultivation, or administration of the biological brain. This study examines the role of logos and ratio in relationship to mind and the forms it takes in the discourse of self-improvement.

In the 1982 lectures *The Hermeneutics of the Subject* (2005) Foucault describes the *epimeleia heautou* (care of the self) as:

...a body of work defining a way of being, a standpoint, forms of reflection, and practices which make it an extremely important phenomenon not just in the history of representations, notions, or theories, but in the history of subjectivity itself or, if you like, in the history of practices of subjectivity. (2005:11)

Foucault goes on to describe the ways in which the *epimeleia heautou* comes to be overshadowed by the discourse of *gnothi seauton* (knowing the self). In my study I look at the practices by which the individual is encouraged to gather knowledge about themselves and subject themselves to the knowledgeable discourse of scientific reason. In terms of the care of the self the nature of the discourse has led me to describe the mode of care as administrative. By this I mean that the telos of the discourse is not to create a beautiful model or object as an aesthetic project, nor to expel evil and purify the soul as an ethical project. The ideal of this discourse seems to be regulation or maximised functionality, or as *Rewire Your Brain* (2010) states, to *nurture nature*.

It is across the three series of lectures *Psychiatric Power* (2008), *Abnormal* (2004) and *Society Must be Defended* (2004a) between 1973 and 1976 that Foucault builds up a non-linear narrative of the relations of power. Beginning with the relation between sovereign and subject he goes on to describe power relations within disciplinary mechanisms and those that occur as a result of biopower and biopolitics. The discourse of self-improvement and neuroplasticity sees itself as calling into question the brain’s right to rule, in doing so it also questions the rights of selfhood, evolution and nature to operate without the interference of mind. Certainly, one can see something like a movement away from a disposed sovereignty towards regulative structures in *Buddha’s Brain* (2009) and an ongoing disciplinary mechanism of self documentation and observation in *CBT for Dummies* (2007) that replace the sovereign behaviour of bad habits. Foucault refers to the surveillance of the individual through written documentation as *pangraphic panopticism* (2008: 55), he goes on to describe a series in disciplinary power that:

...brings together the subject function, somatic singularity, perpetual observation, writing, the mechanism of infinitesimal punishment, projection of the psyche, and, finally, the division between normal and abnormal. (2008:55)
Although Foucault describes biopower as something that operates upon an entire population rather than individual bodies, we can see how the shift from disciplinary mechanisms to biopower’s regulative measures can be used to describe the power relation between mind and brain in this discourse. Once one has used disciplinary measures to correct the imbalance between mind and brain the task of the mindful subject is to regulate the brain, to nurture its nature so that one can “establish an equilibrium, maintain an average, establish a sort of homeostasis, and compensate for variations” (2004a:246). The obvious difference however, is that here it is the individual acting upon themselves, rather than the state acting upon one of its citizens. In my own interpretation of the discourse I have focused upon the regulative aspects of the relationship between mind and brain which I refer to as the administration of the brain.

The notion of administration is not without precedent in the work of Michel Foucault, in his essay *Technologies of the Self* (2000) Foucault compares Seneca’s administrative self care to the Christian discourse on sin and culpability:

> Seneca uses terms not related to juridical but to administrative practices, as when a comptroller looks at the books or when a building inspector examines a building. Self-examination is taking stock. Faults are simply good intentions left undone. The rule is a means of doing something correctly, not judging what has happened in the past. Later, Christian confession will look for bad intentions. (2000:237)

As can be seen from the discourse under analysis here, it is not so simple that bad habits are simply evil and must be destroyed, it is a matter of conversion. Bad habits are seen as being a waste of resources and must be converted into something more productive. The technique of mindfulness represents the correct use of negativity, negativity is something to be observed and subjected to reason, not engaged with or identified with in an emotional manner.

While the methodology of this paper has been influenced by Foucault, the subject matter itself has been inspired by the writings of Catherine Malabou relating to habit and plasticity. In particular, the questions raised by her book *What Should we do With Our Brain?* (2008) have been the inspiration behind the investigations here as to what forms of plasticity are being described by the discourse of self-improvement that bases its practices upon neuroscience. Malabou states that “The screen that separates us from our brain is an ideological screen” and that the scientific descriptions themselves “...which, pretending to lift the screen, really just reinforce it by producing no critical analysis of the worldview they implicitly drive” (2008:40). Malabou’s text also describes how brain plasticity has been enlisted in a project of an economy of flexibility connected to the possibility of increasing and
decreasing performance where the brain is regarded as “personal capital, constituted by a sum of abilities that each must “invest optimally.” (2008:46).
2 The Buddha’s Brain, the Practical Neuroscience of happiness, love and wisdom

Introduction

As the title instructs, what The Buddha’s Brain offers as an aim is a Buddha-like state of mind achieved through the methods of neuroscience rather than through Buddhism alone. Very broadly, what the Buddha-like state of mind amounts to in the discourse is a mind that avoids the “three poisons; greed, hatred and delusion” (2009:103) and seeks the states of “happiness, love and wisdom” (2009:1). The book makes use of what it calls “a revolution in science” (2009:v) in order to “use the mind to change the brain” (2009:v), yet is also relies upon what it calls the three pillars of Buddhist practice, described as “virtue, mindfulness and wisdom” (2009:13). The discourse describes virtue as the regulation of actions, words and thoughts to benefit the self and others. Mindfulness is equated with attention and wisdom and is described as “common sense applied to suffering”. The discourse supports itself by pitching its aims against the stresses of modern life which “overload”, “overwhelm” and send the individual into “automatic pilot” (2009:vi). In many respects we can refer to this discourse as a corrective discourse, as it sets about correcting the imbalances of the individual caused by the imperfections of nature and the detrimental effects of modern society.

Mother nature’s botched job and the subjection of the animal to logos

The discourse of Buddha’s Brain (2009) makes use of both the evolutionary and neurobiological discourse to support its separation between the mind and brain, the aim of which is that we should move from a situation where the brain makes the mind towards a situation where “the mind uses the brain to make the mind” (2009: 10). The brain becomes linked in to a discourse about the animal and biological, while the mind is linked in to a discourse about the nature of reason, the nature of reality and the nature of the truth. Although it is apparent that the animality of the habits of the biological brain becomes the ethical substance of this discourse that must be subjected to the logos of reason and scientific knowledge, the split cannot be said to be absolute in terms of a mind body dualism or a distinction between good and bad.

According to Buddha’s Brain the habits of the biological brain are geared towards survival and reproduction, but as they go against the true nature of reality they inevitably lead to suffering (2009:11). The discourse describes how the nature of the animal (meaning biology
or brain) leads us to separate what is connected, to stabilize what is in flux and to “hold onto fleeting pleasures and escape inevitable pains” (2009:12). In order to support this critique of the tendencies of the brain the discourse sets out an ontology that describes reality as being falsely experienced by human perception and in a constant state of transformation. It also describes the inescapability of pain. The brain then, who’s primary interest is in its own survival is described as:

...trying to stop the river, struggling to hold dynamic systems in place, to find fixed patterns in this variable world, and to construct permanent plans for changing conditions. (2009:33)

The habits of the brain are described as drawing on much the “same neural circuitry used by a monkey to look for bananas or a lizard to hide under a rock.” (2009:34). All of this serves to cordon off certain parts of the individual and separate them from mind in order to prepare a surface upon which the mind can operate in order to transform itself.

The overall effect of the discourse is to describe the brain as being hardwired for negativity, stating how “your brain is like Velcro for negative experiences and Teflon for positive ones” (2009:41). The brain is described as having a “negativity bias” (2009:75) which requires an “active effort to internalize positive experiences and heal negative ones.” (2009:75). When the discourse speaks of desire, it speaks only of the brain as having desires or cravings, placing them on the side of the biological rather than the mind such as when it states that “your brain has a built-in desire for stimulation that likely evolved to prod our ancestors to keep seeking food, mates, and other resources” (2009:179). The position of power given to mind over aspects of behaviour is justified by the discourse by saying that “when you tilt toward what’s positive, you’re actually righting a neurological imbalance” (2009:75). The ideals of the discourse are identified as being the correct state of things, the individual as they are is in a state of imbalance that needs to be corrected. The imbalance is not entirely due to mother nature’s indifference to the experiences of individuals in the face of the grand plan for survival and reproduction, the discourse also puts the imbalance down to the nature of society itself “essentially, modern life takes the jumpy, distractible “monkey mind” we all started with and feeds it steroids” (2009:180).

The aim of the discourse is to increase the activity of the reasoning parts of the brain, that which the discourse refers to as the most evolutionary recent level, rather than the animal parts. The two networks are described as being “the reasoning anterior cingulate cortex and the emotional amygdale” (2009:107). The aim of the discourse however is not bring the emotional networks under the complete control of the reasoning networks, but to correct the imbalance of power between them, yet because of this originary imbalance in favour of the
emotional brain it requires reasoning to play an active role to bring down the level of control that the brain currently has over the mind.

The administration of networks and the regulation of the flow

The individual is invited to take the position of the mind-subject, as the corrector of imbalances and the re-animator of that which has become frozen or blocked. The discourse states that “we consider the mind as an embodied and relational process that regulates the flow of energy and information” (2009:v). The activity, or practice, of this mind-subject is that it intentionally directs “the flow of energy and information through our neural circuits so that it can directly alter the brain’s activity and its structure” (2009:v). However, the discourse invites the individual not only to take up the position of administrator or reformer, it also states that the activity of the mind can be responsible for building circuits and creating “new neural structures” (2009:5)

The discourse states that:

What flows through your attention sculpts your brain. Therefore, controlling your attention may be the single most effective way to shape your brain, and thus your mind. You can train and strengthen attention like any other mental ability; mindfulness is well-controlled attention. (2009:189)

What this entails then is the mind rejecting the presence of negative thoughts and tendencies as described by the discourse and turning its attention towards that which the discourse describes as positive. Certain parallels can be drawn here between the direction of attention and the disavowal and disowning of sinful thoughts in the Christian technology of the confession. However, the goal here is not the cleansing of the soul in order to become pure. As long as the attention and focus of the mind are directed in the right places other kinds of thoughts and feelings that might exist in the subject are of no importance. There is no need here to hunt every dark corner of the soul in order to cleanse it or to understand it, starved of focus and attention it is believed that negativity will wither away and die.

Relief from suffering as the aim of the discourse

Of all of the books in this study, this is the one the focuses most upon the experience and reactions to emotions as the ethical substance to be worked upon. The discourse states that its aim is to “develop ease and compassion, relieve suffering” (2009:vii), yet the suffering upon which it operates is of a particular kind, the fact that we suffer because we suffer. This is the
suffering that follows the traumatic event, while the event itself is seen as a reasonable cause of suffering, such as the death of a relative, the fact that we then suffer from our grief, and that our grief becomes a secondary source of suffering, is seen as an unnecessary form of suffering. The discourse states that “this kind of suffering—which encompasses most of our unhappiness and dissatisfaction—is constructed by the brain. It is made up.” (2009:12). This is a form of suffering with no origin in reality, being entirely produced by the brain the discourse seeks to dispel it through the use of reason. One of the main causes of this suffering is said to be simulations or fantasies as they deny reality, give exaggerated accounts of potential pleasures and pains, have an oversimplified conception of complex reality, are built upon the past rather than the possibilities of the future and ignore the greater rewards of contentment and inner peace (2009:44-45). The discourse requires that reason and the mind should intervene in the passive reception of fantasies and use the technology of fantasy against the brain itself. By fantasizing positively the mind can change the negative tendencies of the brain (2009:46).

One of the techniques that the mind can use against suffering is equanimity which the discourse describes as being:

...neither apathy nor indifference: you are warmly engaged with the world but not troubled by it. Through its nonreactivity, it creates a great space for compassion, loving kindness and joy at the good fortune of others. (2009:110)

The discourse describes this as creating a kind of buffer between the individual and their experiences, a kind of disenchantment (2009:112). In neurological terms the discourse describes it as allowing the limbic system to fire as it wants without responding directly to it (2009:111). The discourse states that this buffer between experience and reaction allows both the true nature of the individual to appear and for the reasoning of the mind to redirect the flows of reaction into something more positive. The usual responsiveness of individuals to their experiences is seen as something brought about by evolutionary concerns rather than being in the best interests of individuals.

It is worth noting that like the Christian and Freudian discourses, this discourse is based around desire. One of the “aims of the discourse is to bring freedom “from craving (desire) and the suffering it brings.” (2009:114). Yet, unlike the Christian and Freudian discourse it is not a matter of discovering the truth about desire here, there are no self interrogations about intentions or desire, there are no attempts to find explanations for desire in the actions of others or in the unconscious. This discourse focuses instead upon the mode of experience of the desire itself without a moral judgement about what the desire is for and whether it might it
might be classed as a perversion or a sin. The intention is instead that desire should be experienced from a distance and weighed up according to reason and whether it will have a positive or negative outcome for the individual and those around them.

“Now we come to perhaps the single greatest source of suffering—and therefore to what it’s most important to be wise about: the apparent self.” (2009:205) As we will see later, this does not entail a complete eradication of the self, but rather the problems connected with the over-identification of the individual with a particular mode of selfhood, and the discourse contains some alternative models of subjectivity which are seen as having a greater correspondence to the true state of things. The discourse describes how the striving or craving to have something as one’s own goes against the reality of the transient nature of existence. This underlines the difference between this discourse and the discourse of self-mastery that is to be found in Foucault’s care of the self, however, his final writings on the cynics suggests that there was an ongoing discourse on the refusal of the forms of subjection that were currently in existence.

**Veridiction**

As the truth of the self in Buddha’s Brain is that there is no self, it’s understandable that there is little space there for the subject to tell the truth about itself. Due to the nature of being a book, rather than a relation between two individuals as might occur between priest and parishioner or teacher and student, the telling of the truth is mostly a one way street in that the book contains the truth about the self and there is little room for interaction between writer and reader. This may be partly responsible for the fact the discourse here demands that the reader become their own other by forming subpersonalities in the form of trusted guardians and mentors who can remind them of the truth about themselves. There are however a few exercises in the book where the reader is invited to speak the truth about themselves, such as where the reader is asked to write about the place where they seek refuge and when they are asked to write a “personal code of unilateral relationship virtues” (2009:148). In many respects the reader is required to undermine that which appears to be their truth in terms of their desires and their self and then submit themselves to a universal form of reason and scientific knowledge. The discourse instructs the reader to focus on speaking their truth (2009:155) and that they are an expert on their own experiences (2009:150), yet this would only follow the aims of the discourse if they would be willing to subject themselves to forms of selfhood that are implied by the discourse itself.
The fragmenting of the sovereign self and its devolution into the functional principalities of mind

The discourse instructs the reader to perceive that which is normally seen as belonging to the self, the memories, desires and emotions as nothing more than a flow of *mind-objects* with which one should not identify or be drawn into, that one should “watch the movie without stepping into the screen” (2009:188). The reader is instructed to replace the “I” with a range of *subpersonalities* such as the *little guardian* and the simulated virtual selves of others that can be used for empathy. These *subpersonalities* are not to be identified with, but to be seen as functional modes of being that can be used on the path to greater happiness. The discourse describes the *little guardian* as living in the anterior cingulated cortex, so we see a shift from an automatic brain induced sensation of self to the reasoning *subpersonalities* that are the creations and tools of the mind. The discourse identifies the experience of selfhood as being “patterns in the mind and brain” (2009:208), like a unicorn, or a ghost, the representations of self exist but the thing being represented is in fact imaginary.

Using the support of the scientific discourse of neuroscience the discourse of the book goes about explaining the illusion of the unified self and the reality of the fragmented self that is in fact a multiplicity of brain functions. *The reflective self* is identified as originating in:

...neural connections among the anterior cingulate cortex, upper-outer prefrontal cortex (PFC), and hippocampus; the emotional self (“I am upset”) emerges from the amygdala, hypothalamus, striatum (part of the basal ganglia), and upper brain stem (Lewis and Todd 2007). (209:209)

The discourse also describes how *the autobiographical self* that incorporates *the reflective self* and the *emotional self* is located in the prefrontal cortex (2009:209). The discourse describes the necessity of deactivating *the autobiographical self* thereby fragmenting the many *subsystems* of selfhood that exist within the individual and allowing them to be observed by the mind without the enchantment of the sense of having a single identity. Subjectivity is described not only as the by-product of awareness and brain processes, it is also described as the by-product of interactions with the world. On entering a room, one becomes the subject of the experience of experiencing that room.

The discourse also describes the self as organizing itself around strong desires (2009:213) which has strong echoes of the Freudian/Lacanian discourse on the formation of the subject in relationship to the drives. The discourse also states that the “self has been stitched into human DNA by reproductive advantages slowly accumulating across a hundred thousand generations.” (2009:215) which continues the discourse’s practice of identifying that which
must subject itself to transformation and the reasoning of mind as having its origins in evolutionary advantages. One can also see the Freudian connections between reproductive advantages and erotic drives and sexual desire, which one could also describe as being evolutionary strategies.

The discourse states that “the self is truly a fictional character. Sometimes it’s useful to act as if it’s real, as we’ll see below. Play the role of the self when you need to.” (2009:214) The important thing then, is not disavow the self, to resist it or attempt to destroy it, but to use it to one’s advantage while seeing through it. What the discourse describes is a performative strategy of subjection in the name of reason. The reasoning that it provides is that when one sees through the mist of selfhood and understands that it is only a product of the brain and a tool for the mind one opens the way for “open-hearted spaciousness, wisdom, values and virtues, and a soft sweet joy.” (2009:215). The connection here to the Christian discourse described by Foucault is undeniable, in both cases we see that what the project of transformation entails is the clearing away of the desires to make way for the inflow of an openness and sweetness of being, one must desubjugate oneself to make way for the truth of being which amounts to a kind of reunification with the ground of being. What we find then, is a split between the neurological subselves, the performative self ruled by reason and functionality and the ground of being that can only be accessed through penetrating these many forms of selfhood.
3 Rewire Your Brain – Think Your Way to a Better Life

Introduction

Of all of the books in this study, this one describes a much closer relationship between neurological networks and the production of thoughts and feelings. It is in this book that we find the specific description of plasticity as referring to the synapses of the brain. The book states that knowledge about the brain is a condition of being able to bring about changes in thoughts and feelings. The discourse sets itself against a determinist position that describes the conditions of the self being created by genetics, the discourse describes this as the hard wired model, which the discourse attempts to replace with a soft wired model of neuroplasticity. It also sets itself against the use of prescription drugs such as Valium and Ativum which the discourse dismisses as unnecessary. According to the discourse, the brain is in need of taming (2010:2) and rewiring. The unbalanced, unregulated brain is described as having a tendency to overreact, much like the reactions of a neurotic, paranoid or hysteric subject. The discourse also targets what it refers to as cognitive distortions which include negative and emotional thinking and polarized reasoning. Like many of the other books in this study, it also contains a critique of contemporary existence, stating how it creates an ADHD society, something that the discourse attempts to reverse by the use of concentrated attention.

Knowing your neurological self

Like other books in this study this one targets the amygdala as a source of imbalance in the brain, the discourse describes how:

The amygdala is triggered by intense emotional states like fear, and it assigns emotional intensity to the incoming information. The amygdala can be triggered by a quick glance from a very attractive person or by your boss glaring at you. It often serves as a sort of panic button. (2010:14)

The amygdala appears as something like an itchy trigger finger, a hypersensitive interpreter of possible risks and possibilities, the discourse puts its sensitivity down to an evolutionary strategy that helps us avoid fatal risks. The discourse states that is the frontal lobes that are to be enlisted in the rational taming of the amygdala:
Your frontal lobes are sometimes called the executive brain or the executive control centre because they are important in orchestrating the resources of the rest of your brain. The frontal lobes decide what to do, how to stay positive, and how to appreciate the larger picture of life. By being positive and active, you’ll rewire your frontal lobes (2010:16).

One of the methods of taming the amygdala is to desensitize it by exposing it to that which it reacts against, by exposing itself to that which it fears, the individual can habituate itself to situations.

More than any of the other books, Rewire Your Brain (2010) puts the parts of the brain into the context of a system of signals:

...The amygdala signals the hypothalamus, which is responsible for many metabolic processes and involved in the autonomic nervous system. This signals the pituitary gland, which signals the adrenal glands to release adrenaline and later cortisol. This chain is called the hypothalamus - pituitary – adrenal (HPA) axis. Neurochemically, norepinephrine, along with a substance called the corticotropin-releasing factor (CRF), is sent from the amygdala to the hypothalamus, which signals the pituitary gland. The pituitary gland then sends a slow message through your bloodstream to your adrenal glands, telling them to secrete cortisol, a stress hormone that can keep you charged up a little longer than adrenaline does, to deal with the stress. (2010:31).

The discourse also describes the neurological process of love in a similar fashion (2010:161-163 appendix viii).

**Nurtured nature as the ideal form of administration**

The discourse states that the habits, feelings and thoughts are not the only things that need to be worked upon, the discourse also seeks to enhance the brain’s longevity (2010:viii) and to maximise its functionality. In order to reach this aim this book seeks to regulate the individual’s diet, exercise regime and sleeping patterns, the ethical substance here is the relationship of these practices to their effects upon the brain. To this extent it can be said that one of the main aims of this book is the maintenance of the brain as something like a natural resource that is to be conserved and exploited to its full potential. According to the discourse, in order to reach its full potential the brain needs to be fed with the right kinds of stimuli and the right kind of raw materials such as certain foods that provide the brain with the chemicals it needs in order to operate at maximum. The brain also needs to be corrected from the wrong
forms of domination that have been formed by its biology and by its environment. The discourse discusses topics that are familiar to us from popular media such as “how to improve your memory” and “how to eat healthily”, yet what we find in this discourse is that this advice is not given in the aim of some kind of aesthetic ideal or to increase a person’s standing among their friends, one is not eating healthily to obtain a desirable body or an acceptable body, it is instead in order to maintain the brain. We find similar advice in *Buddha’s Brain* (2009) where the discourse encourages the use of supplements such as phenylalanine, tyrosine and tryptophan to maximise the performance of the brain (2009:232-233). The discourse also refers to social relationships in the same manner, their role in providing the brain with the raw materials that it needs to function properly and the benefits they give such as repairing the immune system (2010:145-146 appendix vii). The discourse also instructs the reader to laugh and smile more often, as it is good for their brain even if they feel unhappy (2010:184).

From this it can be seen that unlike Foucault’s analyses that describe aesthetic or ethical goals, the goal of this discourse is the fully functioning machine. That is not to say that it does contain aesthetic or ethical notions, but it does represent a shift in the way of thinking about the self as a project, where the beautiful and the good no longer have such a prominent place in the telos of the discourse. These ideals have been replaced by an administrative model that views the self as something in need of maintenance and at constant risk of breaking down. This ideal of administration, or regulation, is not without its precedents in modern society, certain lines can be drawn between this and the ideal of the well administrated state, the state where the main method of government is that it provides the state with the conditions it needs in order to regulate itself. Lines might also be drawn to the Zizekian notion of the injunction to enjoy (2007:84), this injunction comes not only from the superego, but also from advertising’s injunction to consume which is seen by Zizek as being addressed to the superego. Enjoyment is justified along psychological lines; that a person needs a certain amount of satisfaction in order to be a well adjusted individual. Those who are undernourished in terms of enjoyment are seen as frustrated or hysterical, desire is seen as something that needs a certain amount of satisfaction, or maintenance, in order not to upset the equilibrium of the individual.

Like other books in this study, this discourse intertwines notions of negativity and passivity, the discourse states how the author and a patient:

...talked at length about how passivity increases depression. I described how the brain processes passivity and simultaneously spurs depression. The left frontal lobe promotes positive feelings and taking action, and the right frontal lobe promotes passivity and negative emotion (2010:46).
The discourse concentrates upon stimulating the left frontal lobe in order to make it dominant against the right, one of the ways in which it does this is through using language to describe states of mind and to construct narratives. The discourse describes how:

Since your left hemisphere is more positive, if you maximize its ability to put a positive spin on your narratives, you cause your brain to rewire with a positive perspective. You modify your memories each time you remember them. Your left hemisphere can activate and change those memories with a positive spin. It also helps you to cultivate a positive narrative about what you will remember.

(2010: 56)

From this we can see that memories are something else that are seen as standing by as a resource to be enlisted in the transformation of the brain.

**The self as a standing reserve**

In Martin Heidegger’s *The Question Concerning Technology* (1993) [1953] he discusses the dangers of modern technology’s mode of presenting/revealing/production becoming the dominant or only form of bringing forth. For Heidegger, technology both reveals and conceals, it brings forth, yet it also creates the forms in which things can be brought forth, which he calls enframing. The result of modern technology’s mode of bringing forth is that objects come forth as standing reserves. Although the power of a river is brought forth by the power station, the river is then seen from the perspective of being a “water-power supplier” (1993:321), the technology that brings forth defines the essence of that which it brings forth. Heidegger goes on to say that “whatever stands by in the sense of standing-reserve no longer stands over us as an object” (1993:322). Objects come to be known to as being immediately on hand, things that can be ordered and put to use.

Heidegger goes on to speak about the mode of bringing forth in modern science, how physics “sets nature up to exhibit itself as a coherence of forces calculable in advance” (1993:326). For Heidegger, the more that man attempts to order reality according to his will, the more it appears according to man’s modes of revelation, shaped by his will. With no object left to stand in the way of that will or anything that might stand above man, man becomes nothing more than the administrator or one who orders the things that are brought forth in his own image. The danger, as Heidegger sees it, is that man himself will come to be nothing more than a standing-reserve dominated by contemporary forms of enframing. Certainly, I think it is possible to draw lines between Heidegger’s concerns and the enframing
created by the modes of self production that we find in the discourse of *Rewire Your Brain* (2010).

The discourse states that rewiring the brain is a way of nurturing nature and sees nothing problematic in the manner in which it makes the brain come forth and the aims which it sets for the reader:

> We have moved far away from the old debate on nature versus nurture; now we are able to “nurture nature.” Since your brain is not hardwired but is really “soft-wired,” your experience plays a major role in how you nurture your nature. (2010:3)

For the discourse, science has reached a stage when it knows nature even better than nature knows itself, it knows how to create the best conditions for nature’s self-regulation and how to maximise its potential. Yet following Heidegger we can see that the discourse enframes the modes of appearance of that nature, confining it to appearing in terms of the *causa finalis*, the biological functions of the brain and the uses to which the brain can put. This can be said to perhaps come at the cost of the other possible modes of appearance of the brain such as the *causa materialis* the material out of which the brain is made, the influence of the nature of matter upon the nature of the brain which could perhaps be explored by something such as quantum physics.

*Neuroscience and the gendered brain*

An interesting feature of the discourse is that it attempts to define differences between the brains of men and women;

> The corpus callosum of a woman is denser than that of a man. This means that the two hemispheres of a woman’s brain work more evenly together. The female brain is more symmetrical. The male brain has an asymmetrical torque, which means that the right frontal lobe is larger than the left frontal lobe, and the left occipital (back of the head) lobe is larger than the right occipital lobe. (2010:4)

By speaking in the name of science the discourse enables itself to speak of “woman” as a different kind of person to a “man” in terms of their biology. This opens the door for more speculative descriptions that are worded as interpretations of the biological data, the discourse states that:

> Since women’s brains have a better connection between the two hemispheres than men’s brains do, women are said to be more intuitive. Words often carry more emotional meaning for women than they do for men. (2010:4)
It might be more correct to say that the stereotypical view of women sees them as being more intuitive and biological data appears to agree with this. It seems as though these descriptions of the neurological sexes give a good example of the enframing described by Heidegger, the identities of men and women are brought forth by gender, yet they also enframe the being of individuals. The cultural distinction that says sexual characteristics describe if you are a man or a woman is the frame through the distinctions between male brains and female brains are brought forth.

The discourse goes on to state that:

Women have a greater density of neurons in the temporal lobe, which specializes in language. This verbal advantage begins to appear during the first two years of life, when little girls develop the ability to talk about six months earlier than little boys do. When developing verbal strategies, women activate the left hippocampus (a part of the brain related to memory) more than men do. Men generally have greater visual and spatial skills, because they show greater activity in the right hippocampus than women do. (2010:4)

We can find support here for Judith Butler’s critique of the distinction between cultural gender and biological sex in her book *Gender Trouble* (1990). The discourse here seems to be giving evidence for making a distinction between men and women based upon real biological differences in terms of neurological structure. One can begin to wonder what the effects of this discourse upon neurological gender will be, could a person with male sexual characteristics have a female brain? And if neurological gender would become a separate category to biological sex and cultural gender as the collective name for a range of differences, why should one range be female and one male?

*The neurologically wounded subject*

After describing the benefits of being touched for the brain the discourse goes on to give an example of the negative effects upon the brain for those who are not given the appropriate amount of affection. The discourse offers Romanian orphans as an example of those wounded by a lack of affection in terms of their neurological development. The discourse describes how brain scans showed how “key parts of their social brain, such as the OFC, were
underactive” (2010:149). The discourse goes on to add further symptoms and abnormalities caused by a lack of nurturing when young, such as:

- The expression of dopamine transporter genes, the dopamine-mediated stress response, the expression of serotonin receptors, the expression of benzodiazepine receptors, the infant’s sensitivity to morphine and the cortisol receptors related to stress response. (2010:150)

This usage of Romanian orphans as an example of neurologically wounded subjects demonstrates one of the ways in which neuroscience affects the ways in which we think about ourselves and others. The use of brain scans, the setting up of norms and ideals results in a new class of sick people, a new linkage between abnormality and biology. The discourse provides us with a whole new vocabulary of ill subjects and results in the widening of the group which one might refer to as being brain damaged. One example of these new illnesses is the description of those that have an overactive right hemisphere. The discourse also describes those with an overactive left hemisphere (such as Buddhist monks) as having something like a positive abnormality, it may be that these forms of abnormality will come to form some kind of ideal or aim.

...people who overactivate one hemisphere tend to have a particular emotional style, referred to as affective style. For example, people whose left frontal lobe is dominant tend to be more positive, take a more active role in their lives, and embrace a more “can do” attitude than people whose right frontal lobe is dominant. In contrast, people who overactivate the right frontal lobe tend to have a more negative affective style. They tend toward anxiety, sadness, worry, passivity, and withdrawal. (2010:171).

A person might no longer be seen as someone suffering from depression, but as someone who has caused their depression by overactivating a part of their brain, or as someone who is biologically different as they have an overactive right frontal lobe. The neurological perspective will no doubt not only affect the ways in which we think of people being wounded, but also the potential that exists of individuals being wounded and strategies that are to be taken up in order to prevent wounding. By becoming able to see the abnormalities in our brain scans we may come to think about ourselves differently, we may be shown wounds and abnormalities that we had no idea existed, things that we had incorporated into our notions of our personalities may end up being remoulded under notions of abnormal brain functions.

Although the discourse raises neurological damage and abnormality as something that the discourse can work upon, improve and cure, it also raises the question of what this means for those who are excluded from the discourse. For those who have neither the education nor the money to pay for scans and therapy it may mean that we begin to think of them as the new
poor, a second class of citizens who are denied the rights to improve their lives and revoke some of the damage that has been done to them by their environments. The discourse describes one kind of reaction to obtaining neurological knowledge about oneself; of using that knowledge to administer and change oneself according to an ideal. Yet there may very well be other kinds of responses to the neurological perspective; one may be the complete disavowal and disowning of the abnormal and damaged, another may be the acceptance of that damage or abnormality as being a part of the self and not something that is to be transformed. For the Romanian orphans, this description of them as damaged, damages their position as subjects, they are no longer normal subjects, they are now imprinted with the stamp of an event. Plasticity has gone from a source of potentiality to a form of irresistible passivity, whereby each of us may be forever marked and damaged by an event. At the time of our lives that we are at our most plastic, our childhoods, we are at our most vulnerable and most dependent upon others. As we learn more about what kind of harm events can do to a brain, one might wonder if we might begin to talk about cerebral rights in the same way we talk about human rights, might we begin to talk about the right not to be damaged and might the damage we could inflict upon others become a real concern to us?

In Catherine Malabou’s *The New Wounded* (2012) she describes some of the similarities between the discourse on neuroplasticity and Freudian psychoanalysis. In the Freudian discourse it is the libido that creates the flexibility of the subject and must be allowed to flow freely without blockages. Malabou describes how in *Analysis Terminable and Interminable* (2001) [1937] Freud states that:

> We are (in certain cases) surprised by an attitude in our patients which can only be put down to a depletion of the plasticity, the capacity for change and further development, which we should ordinarily expect...But with the patients I have here in mind, all the mental processes, relationships and distributions of force are unchangeable, fixed and rigid. (2001:241)

We can see here how plasticity is filling a kind of normative function in Freudian discourse, the patient’s lack of plasticity is seen as that which prevents the analysis from functioning. Yet too much plasticity is also seen as a problem by Freud, there are also those who are too easily affected, for whom analysis only has a temporary effect before other stimuli make even greater impressions upon them, Freud also states there how “we have an impression, not of having worked in clay, but of having written on water. In the words of the proverb: “soon got, soon gone.” (2001:241). One could no doubt imagine similar arguments being used in the education of children and the judgement of criminals, that they simply lack the plasticity to
change, or are changed too easily. The study of discourses on ADHD and autism would no doubt offer interesting comparisons with the discourse on neuroplasticity.
4 You Are Not Your Brain

Introduction

The discourse of You Are Not Your Brain (2011) can be said to have many similarities with the other books in this study. It features both the charts, ratings and self documentation that are to be found in CBT for Dummies (2007), the Buddhist techniques of mindfulness that are to be found in Buddha’s Brain (2009) and the high level of neurological details that are to be found in Rewire Your Brain (2010). This discourse even uses brain scans to show the effect upon those who carry out its practices upon themselves. The discourse of this book could be said to differ from the others in the way in which it presents itself as an emancipatory discourse, putting great emphasis on the poverty of enslavement to the brain and the potential freedom that can be gained from subjecting the brain to the administrations of the mind. What the discourse claims to give the reader is *veto power*, which it describes as “the ability to refuse to act on a deceptive brain message, uncomfortable sensation, or habitual response” (2011:35). The discourse criticises methods of self improvement that depend solely upon mindfulness or cognitive behavioural therapy as “they do not emphatically tell you that these brain-based messages are not representative of who you really are and that you do not have to act upon them.” (2011:xiv). Like the Buddha’s Brain (2009) this discourse is dependent upon the creation of a subpersonality, the discourse states how:

...we also empower you by showing you that you have within yourself an intelligent, loving guide (your Wise Advocate) that knows that your brain has been the problem, not you or your mind. (2011:xiv).

The discourse describes its methods as “relabel, reframe, refocus, revalue” (2011:xvi) which in turn describes the ways in which the mind improves upon the original labels, contexts, focus and values provided by the brain.

From brain subject to mind subject

The discourse describes how:

...deceptive brain messages suck up your time, take over your life, exhaust you, cause you to lose time or other opportunities, restrict your life and activities, cause you to avoid people, places, or events you enjoy, cause discord in your relationships, make you miss out on important relationships, obscure your reality so that you think that the negative messages are true, keep you from following the path of your true self, keep you trapped and serving others, and cause you to indulge cravings/urges/desires that lead to unhealthy habits. (2011:130-131)
Like the other books in this study, it attempts to split up emotions into their negative and positive versions, the emotional sensations and the true emotions. The emotional sensations are seen as destructive and debilitating while the true emotions enable the subject to act and have a realistic and logical understanding of the world.

The discourse makes a clear distinction between the passive brain and the active mind, describing how:

   The brain receives information from the environment, including images, verbal communication from others, emotional reactions, bodily sensations, and so on, and then process that information in an automatic and rote way. (2011:22)

All of this happens without our awareness being involved and is then passed over to the mind in this form and the “mind has the ability to determine whether it wants to focus either on that information coming from the brain or on something else” (2011:22). It is the mind then that allows or rejects that which is presented to it by the brain. The discourse describes the mind as being responsible for awareness, morals, and values while the brain functions in “survival of the fittest mode” (2011:23).

   Like many of the other books in this study, this one connects the brain to evolutionary theory and genetics, the discourse states that “biology is not destiny and that you need to believe that you are not destined to live a predetermined life based on your genetics.” (2011:24). We can see here how this book continues the struggle to come to terms with that which exists within the subject but at the same time cannot be brought under its control or fully integrated into its thoughts and feelings. We find this discourse repeated throughout history in the discourses on habits and passivity, on the troubling experience of strange dreams and stray thoughts, on the psychological and philosophical theories on the drives and the will and on the evolutionary drives and the genetic memes described by Richard Dawkins. All of these discourses have brought forth further discourses on how to come to terms with this alien presence within subjectivity and what kind of relationships are possible with the object within the subject.

   The discourse states that “we must never capitulate to confusing our biology with our true self” (2011:25). Yet it does not seek to banish biology and recognises our dependence upon our biology for our existence. Although the discourse tolerates biology, it tolerates it only as being necessary for existence and not as a potential source of other modes of being. The discourse itself refers to any kind of reaction to false brain messages as ”feeding the monster” (2011:62). In some respects perhaps this can be compared to the notion of nurtured nature in Rewire Your Brain (2010). In this book we find the two notions of care pitted against each
other, this book states how nature wants us to take care of ourselves so it attempts to set up forms of behaviour based upon emotional rewards that lead to short term gains. The notion of the mind in this book is that it can see further than the brain, it knows better how to care for the self than nature as it knows how to think in terms of long-term effects using reason and logic. The discourse sees itself not as going against nature, but as improving upon it.

The discourse gives descriptions of the areas of the brain which affect the way in which we form judgements, like many of the other books in this study it names the frontal cortex as being the part of the brain involved reasoning and logic and the amygdala as being responsible for emotional reactions such as stress and anxiety. This book also describes the hypothalamus as being responsible for bodily drives, the insula as being responsible for gut level responses such as dread, the anterior cingulate as being responsible for panic and the basal ganglia as being the habit centre that generates automatic thoughts, a kind of dogmatic reasoner. (2011:75-77). The discourse also makes use of the psychological terms ego-syntonic and ego-dystonic. Here the ego-syntonic subject is one who over identifies with the emotions and thoughts produced by the brain where as the ego-dystonic subject recognises that he is a separate being to his deceptive brain messages.

Desubjugation and the mindful subject

The discourse of You Are Not Your Brain (2011) states that “a lifetime of habits, ingrained by repetition, can seemingly make us slaves to a not always beneficial master - our own brain.” (2011:xi). The aim then, is to free the true self from the bondage of the habits formed by the brain. The discourse goes on to describe how:

Nothing is more confusing or painful than when your brain takes over your thoughts, attacks your self-worth, questions your abilities, overpowers you with cravings, or attempts to dictate your actions. (2011:xi).

The discourse invites the reader to interpret situations as being caused by “deceptive brain messages” (2011:xi) when you feel that:

...something is compelling you to ”go” places, mentally or emotionally, where you don’t want to be or you find yourself acting in uncharacteristic ways or doing things you don’t want to be doing (2011:xi)

These deceptive brain messages are described as an intrusion, or invasion into the psyche and “any false or inaccurate thought or any unhelpful or distracting impulse, urge or desire that takes you away from your true goals and intentions in life (i.e. your true self)” (2011:4). However, it is not to be thought that there is some kind of agency behind these thoughts, there
is no devil leading the reader into temptation and there is no deep meaning to these thoughts that might be decoded by a psychoanalytical discourse.

What might in other discourses be referred to as the presence of evil, and is here referred to as self destructive behaviour is explained by the fact that the “brain does not distinguish whether the action is beneficial or destructive” (2011:xii). Not knowing good from bad, or right from wrong, the brain “just responds to how you behave and then generates strong impulses, thoughts, desires, cravings and urges that compel you to perpetuate your habit, whatever it may be.” (2011:xii). It is through the knowledge and techniques provided by the discourse that the reader will be able to debunk the myths about oneself that are created by the brain and “to identify and demystify deceptive brain messages” (2011:xii). According to the discourse, it is only after the reader has overcome the brain’s control that the reader will be able to lead a happier and more adaptive lifestyle. The discourse emphasises the fact that this will be the lifestyle that has been chosen by you with you as the one who as sculptured your brain according to your own design. This design will be one that has been chosen in the name of reason and according to the aims of the true self. It is the true self that has been stifled by the deceptive brain messages. By de-subjecting the true self from the illusions of the brain this creates the space for another self to appear. Yet we can see that the space in which this subject might appear is prepared and limited by the discourse itself, that the one who comes is only allowed to manifest itself in certain forms, forms that follow the rules of logic and reason.

The discourse describes living according to your true self as:

...seeing yourself for who you really are based upon your sincere striving to embody the values and achieve the goals you truly believe in. It includes approaching yourself, your true emotions and needs, from a loving, caring, nurturing perspective that is consistent with how your loving inner guide (Wise Advocate) sees you. (2011:6).

The wise advocate is described as “the aspect of your attentive mind that can see the bigger picture, including your inherent worth, capabilities, and accomplishments.” (2011:7). The wise advocate is a form of technology used by the discourse to support itself. If it were not for the wise advocate we can see that there would arise a series of problems that would paralyse the effects of the distinction between deceptive brain messages and the true self. If there were no part of the self that knows or sees through the deceptive brain messages the subject would fall into a hermeneutics of suspicion where all thoughts and emotions could potentially be false and deceptive.
The split between mind and brain and the setting up a discourse where mind is in need of being freed from the brain means that mind alone cannot manage this, there is a need to set up a third party that can be called upon in cases of paralysing doubt, the wise advocate is the “subject supposed to know” that we find described in Lacan’s 1964 seminar *The Four Fundamental Concepts of Psychoanalysis* (1998). In order to subject ourselves to a kind of knowledge we are dependent upon the idea that someone somewhere knows. In this case, it cannot be us as the mind as our judgements are affected by the brain; the wise advocate appears to have independent reasoning that allows it to guide the mind towards truth.

The self that manifests itself, taking the deceptive brain messages to be its true aims and its true essence is a self that makes us try to:

...find ways to escape reality, use drugs or alcohol, overeat, spend money we don’t have, avoid people we care about, become angry, develop excessive expectations of ourselves, not say what we really think or feel, limit our range of experiences, worry excessively (2011:xiii).

Like Foucault’s notion of the *cult of the self*, the aim here is to separate that which is the false self from the true self, yet we see here how the separation is not total, there is no aim of total disavowal or rejection of the false. Through the techniques of mindfulness the attitude towards the false is merely indifferent. The self then, is not the heroic figure that banishes demons and reaches purity by vanquishing the false and seeking the truth about itself, it is one that is marked by its refusal to interact or recognise these false sensations as being important. The discourse states that “you should not try to stop the thoughts or sensations from arising- instead you should learn how to work around them” (2011:95), the discourse accepts there is no way to block out or banish false sensations, and that it should not aim to do so.

The false becomes a surface against which the true self can push itself away, by constantly referring to itself as not that it creates a desubjected core. Once one has become disenchanted in this manner, it is possible to return to everyday life and the notion of having a self. But it is a notion of a self who must constantly be subjected to surveillance and administration in order to maintain the split which prevents one from over-identifying with the messages sent by the brain and the habits that it produces. The desubjected subject is wholly dependent upon a subjected subject as its project. We seem a long way here from Foucault’s notion of the self as an aesthetic project where the ideals are pleasure and beauty. We do not find here an idea that one should reject desire so that one can enjoy its object all the more, such as in the care of the self where one fasts in order to enjoy food all the more.

The notion of mindfulness suggests something like a universal aesthetic, a universal mode of appearances and sensations, one that allows everything to appear in the same mode of
experience, always at a distance, and always as a standing reserve. They hide no secrets, and should be regarded as fully exposed to mind. The mode of experience promoted by the discourse is the self in the mode of intentionally directed attention. This represents a kind of pure gaze freed up from the bondage of the brain, a gaze which chooses that upon which it will focus. It is a gaze that operates at a safe distance, through the technique of mindfulness; it never runs the risk of being contaminated by that which it is observing. There is no doubt that this kind of position describes a certain kind of power relation between the seer and the seen.
5 Cognitive Behavioural Therapy Workbook for Dummies

Introduction

It can be said that CBT for Dummies is somewhat different to the other books in this study as it does not refer directly to neurological facts in order to support its discourse. However, it is certainly possible to say that this book supports itself upon a particular conception of the mind and brain. This conception is that the mind and brain can be transformed through new forms of thinking and behaviour, so although neuroplasticity is not referred to directly in CBT for Dummies it is directly implied by the nature of the discourse. What is referred to as a neural process or product of the brain in the other books is simply referred to as cognitive behaviour in the discourse of CBT for Dummies.

The discourse makes clear that cognitive behaviour should be interpreted as meaning the effects of thoughts upon behaviour:

As the name implies, CBT is a form of psychotherapy that focuses on cognition – your thoughts – and on behaviour – your actions. One way of summing up CBT is to say ‘you feel the way you think.’ (2007:9)

This relates the notion that thoughts produce feelings, that at the base of every negative emotion or activity we will find a negative thought process, all that we have to do is locate it and correct it. The discourse refers to these thoughts as toxic and describes how these toxic thoughts give a disturbed meaning to events that is out of touch with the true nature of reality. The toxic thoughts are to be replaced by what the discourse refers to as functional thoughts, these are positive and reasonable ways of thinking that can be used to alter negative behaviour. The discourse also aims at particular kinds of emotions which are seen as the rational versions of irrational negative emotions, such as rational concern to replace irrational anxiety (2007:84-85, appendix v).

Core Beliefs as ethical substance

The aims of the discourse of CBT for Dummies (2007) are perhaps more specific than the other books, aiming at the relief from conditions such as anxiety, obsessive compulsive disorder and depression as well as more general emotions such as pride, guilt and shame. The ethical substance which is worked upon is negative cognitive behaviour rather than the administration of the neural processes themselves. A large part of the work is dedicated to the
transformation of behaviour and emotions into a material that can be administered; it does this by a series of questionnaires, tables and diagrams that turn states of being into statistics and documents. Throughout the book the reader is asked to recognise themselves in the symptoms described and the rationality of causes and effects described by the discourse. What all the books in this study share is the transformation of thoughts and emotions into a material. Whereas the other books look towards the biological material of neurological processes and elements, this discourse exteriorises sensations and experiences into a written form.

It is this discourse that offers the most advanced construction of ethically determined behaviour, gambling is classed as “self-destructive behaviour” while “neglecting your hygiene” is classed as “mood lowering” and “not speaking much at social gatherings” is classed as “avoidance behaviour” (2007:16 appendix ii). The other books mostly concentrate upon negative thoughts and feelings that have been caused by biological tendencies and can be corrected by changes in the way the subject thinks and reacts to their feelings. In this book we find that it is not a biological process or imbalance causing the behaviour, but a thought or belief or even an event that remains in the memory of the individual. The result is a kind of hermeneutics of suspicion, that there must always be a reason for behaviour and that all forms of behaviour must be interrogated in order to find out if they are good or bad. If the behaviour is bad, then one must attempt to uncover the chain of causality that produced it. Whereas the care of the self would have begun with changing the behaviour itself according to its aesthetic or ethical qualities in relation to the ideal form, here it is knowledge that is seen as producing change while the ideal forms operate silently in the background.

**Subjectivation - Be the scientist of your self**

In order to move away from the wrong kinds of thoughts the discourse informs the reader that they must think like a scientist:

> Using CBT resembles being your own personal scientist, trying to see whether your conclusions (your theories) about yourself, the world, or other people, drawn from your personal experiences (your data) are valid or accurate, or whether an alternative conclusion might be more accurate. And just like a scientist, you may need to conduct further experiments to compare two or more theories to see which one best fits the facts. (2007:51)

These experiments amount to something like testing one’s worst fears in a controlled fashion (2007:52 appendix iv). Not only is the reader asked to become like a scientist, they are also
asked to become like an accountant and to view thoughts and behaviour as a kind of economy where costs should not outweigh profits, the reader is told that:

You can use the Cost-Benefit Analysis form (a CBA form for short) to review the benefits and the costs of your emotional and behavioural goals. Costs are inherent to giving up an unhealthy emotion or behaviour, although they very often are outweighed by the benefits of reaching your healthy emotional and behavioural goals. For example, one of the costs of giving up the unhealthy rage that Tom identifies is not impressing upon his wife and friends how badly he thinks he’s been treated. Although this situation may be a short-term cost, in the long term it is small change in comparison to getting on with his life. Doing a cost-benefit analysis can help you to evaluate accurately what going for your goals costs you and what it ultimately pays you. (2007:123)

In order to make this shift from subjective feelings to objective facts the reader has to subject themselves to a process of naming and ordering their emotions and testing them against reality. The position of one who takes up the project of self-surveillance/self monitoring is a position that needs to be maintained and sustained by the discourse, this can also be said about a position where the individual is asked to take up the project of self-interrogation, this analysis looks at the technologies and relations that attempt to make that possible.

*The administration of the hupomnemata*

In Foucault’s *On the Genealogy of Ethics* (2000:272) he takes up the discourse on *hupomnemata* in Plato’s *Phaedrus*. The *hupomnemata* are described by Foucault as being notebooks or copybooks and rather than describe them from the perspective of a struggle between oral and written discourse for the rights to the truth, Foucault examines them from the perspective of government. Foucault explains how the *hupomnemata* fit in with the idea that:

One must manage oneself as a governor manages the governed, as a head of an enterprise manages his enterprise, a head of a household manages his household... the ancients carried on this politics of themselves with these notebooks just as governments and those who manage enterprises administered by keeping registers. (2000: 272)

For Foucault, the *hupomnemata* represent a form of *material memory*, a resource in the government of the self. This government requires a certain *askesis* or technology that must be learned. It is this technology of self-government in relationship to the *hupomnemata* that forms the basis of this analysis of *Cognitive Behavioural Therapy Workbook for Dummies* (2007).

Foucault also takes up the differences between the use of *hupomnemata* in ancient Greece and how they would come to be used in the discourse of Christianity. During the Christian era
the keeping of diaries and notebooks comes to have a more occult status, rather than being simply the rearrangement of that which is the case, as if one were simply expressing statistics in a different kind of chart or table, writing comes to have the status of a kind of mirror of the soul. It is through the act of writing that the illusion of subjective experience is penetrated by the light of reason, we see this particularly in the recording of dreams. The arrangement of obscure symbols and images in a textual form allows them to be examined and compared.

According to Foucault, the difference between the ancient Greek and the Christian use of *hupomnemata* is that while the material collected by the Greek *hupomnemata* is there to be used in the aesthetic project of self formation as a kind of base material, the Christian *hupomnemata* are used as a way of extracting the impure and the sinful. The *hupomnemata* can then work as a kind of proof of the dependency upon God, the poverty of the self and the need of the sinner to be saved. This does not, of course, account for the resistances to this notion of the self within Christianity and the mystical tradition of using writing to get closer to God, which is taken up elsewhere by Foucault. This analysis looks at both the disciplinary and governmental aspects of *hupomnemata*.

In our time we live at the intersection of all these discourses about the government of the self, Foucault names the *Californian cult of the self* as one such example of the contemporary discourse on the self where:

...one is supposed to discover one’s true self, to separate it from that which might obscure or alienate it, to decipher its truth thanks to psychological or psychoanalytical science, which is supposed to be able to tell you what your true self is (2000:271)

This is something which Foucault sees as being diametrically opposed to the ancient culture of the self. We can also add something of significance for *CBT for Dummies* (2007), that of the need to constitute oneself as the subject of a universal rationality. From the time of the enlightenment we see the promotion of the idea that only those that use their reason in the correct manner can see the truth. Reason is seen as something that belongs to everyone as a resource and as a right and consists in being able to connect causes and effects together in the right manner, not just as effects for the individual, but as effects for society as a whole in terms of constituting oneself as a moral subject. As we shall see from this analysis, *CBT for dummies* (2007) is all about learning to connect causes and effects in a rational manner according to a universal logos, the book sets us out on the project of collecting documentary evidence of effects and causes that we can place under the government of reason.

The act of self-documentation is an act of self-presentation, and even if the document is made for the writer’s eyes only, it becomes a focal point for all the possible gazes that could
potentially fall upon it. In Foucault’s essay *Self Writing* (2000:207) he describes the importance of the emotion of shame in the use of self-writing for self disciplining oneself. If one acts, or thinks of something shameful, then one must document it and run the risk of being seen. What the charts and diagrams in *CBT For Dummies* (2007) represent are not the free use of writing to represent the self, one does not constitute oneself freely through the written word there, rather one answers a question that enframes the kind of focus or gaze one directs toward oneself. Foucault refers to the writing of the *hupomnemata* as being part of the “subjectivation of discourse” (2000:210). By constituting oneself as a textual self that corresponds with the one constructed by the discourse one recognises that the discourse is addressing itself to oneself rather than an abstract and universal notion of a subject. A level of intimacy is then established between the discourse and the self, opening the way for a flow of instructions from the discourse into the self.

The filling in of forms and the documentation of the self is a way of establishing a particular kind of relationship with oneself. By collating evidence about oneself and laying out that information in a table one can ascend above those aspects of the self and see how those aspects connect to other aspects that might be found in the table. The table suggests a form of full exposure to the self, in the form of a document thoughts and feelings become stabilised as an object for reflection. The statements also produce a certain kind of distance between feelings and the understanding, the sensation of hating becomes the statement “I feel hatred”. By the administration of the table and the surveillance of its details the statement can be inserted into new alignments of causes and effects. The self becomes the provider of the raw materials for transformation and also the surface upon which these transformations are carried out. The table also forms a kind of test of re-admission, the statements are examined and assessed according to their validity, allowing reason to evaluate if they should continue to form a part of its being. We can perhaps agree here with Foucault’s judgement that rather than knowledge appearing as a consequence of the care of the self as it did in ancient Greece, the knowledge of the self constitutes the fundamental principle in modern discourse (2000:228).

**Diagrammatic emotions – Subject as substance**

The reader is first invited to identify themselves with a series of symptoms in the form of a checklist (2007:13 appendix i) followed by a checklist of what it refers to as *bad behaviour* (2007:16 appendix ii) this serves as a form of interpellation whereby the reader recognises
themselves as the subject of the discourse. Further on in the book they are asked to identify their obsessions and compulsions (2007:158-160). The reader is also asked to rank their behaviour and symptoms on a scale of one to ten to further aid the recognition of that which needs to undergo transformation. The reader is instructed to keep a thought record (2007:35 appendix iii) which is to be followed up by the identification of thought errors and an attempt to use an alternative thinking based upon the correction of those thoughts. The reader is also invited to draw up schedules of when their wrong thinking takes place and draw up timetables and long term plans for future changes. (2007:152). Later on in the discourse the reader is invited to put the wider aspects of their lifestyle under analysis. (2007:239 appendix vi) In many respects it is the table that does the instructing in this book rather than the authors directly instructing the reader. By acting as a mirror to the subject it provides them with the facts about themselves, from there it is logic and reason that leads them to change their destructive behaviour.

The discourse also attempts to find the origin of thought errors which it puts down to core beliefs which, as in psychoanalytical discourse, it believes to have often originated in traumas or events during childhood. In order to get to core beliefs the discourse employs something called a “downward arrow” (2007:208) which consists of repeatedly asking oneself “and what does this mean about myself?” The discourse describes how thoughts follow a line of inferences, and all that one needs to do is follow these inferences back to a core belief. According to the discourse it is the core beliefs that one must alter, that must be worked upon, and the reader is called upon to do this in the name of reason, that the only logical path is to replace the negative with the positive. The act of writing down a new belief, that somehow through the act of writing one makes something more real, or more true, seems to operate as something like the kind of magic that one finds in written charms, curses and oaths.

The discourse seems to have some awareness of the difficulties involved in getting reason to govern ways of thinking:

But very often we hear patients say, ‘I know these new beliefs will help me but I just don’t really believe them yet.’ In CBT parlance we call this division between what you know to be true and helpful and what you actually believe, the ‘head-heart’ or ‘head-gut’ issue (2007:219).

The discourse’s answer to such problems seems to follow a somewhat Pascalian line of thinking, that one should act as if one believes, and then the belief itself will come. The discourse returns to this to say that “one of the best ways of truly embracing new beliefs and ways of thinking is to behave as if you already really believe them” (2007:223). In order to help the new healthy beliefs to settle in the discourse states that one should try writing the
new belief down on a piece of paper, imagine that one already believes and acts upon that belief and identify certain times when one can “test drive” new beliefs for a limited period.

The discourse goes on to give an outline of what the beliefs that one replaces the negative core beliefs with would look like. Their first attribute is that they are flexible and take the form of a preference rather than an imperative. The second attribute concerns the usage of inference, that healthy beliefs include:

...a sensible if-then statement. Instead of concluding extreme negative things about yourself, others, or the world based on a singular event, you can put the event into a healthy perspective. So rather than ‘If I fail at something, then it proves that I am a total failure’ you may believe ‘If I fail, then it’s bad but not terrible and just means that I am a normal fallible person’… They should also include a positive and realistic general truth, be true and consistent with reality, sensible and logical and helpful to you. (2007:220)

As in *Buddha’s Brain*, this discourse requires that the reader becomes their own other, here they are set the task of simultaneously attacking and defending their new healthy belief in order to increase their conviction (2007:226).
6 On the Ethics of Self-Improvement and Neuroplasticity from a Kantian Point of View²

It seems unlikely that we can refer to the discourse of self-improvement through neuroplasticity as being an aesthetic project that aims at producing a self that should be a thing of beauty. Although one might be able to make some associations along the lines of an aesthetics of functionalism, it seems clear that the discourse has something else in mind as its main aim. Can we then refer to this project as an ethical one? It is certainly not an ethical project along the lines of the banishing of sin or self-purification through direct struggles against evil such as in certain Christian discourses. The aim of mindfulness stands in direct opposition to that approach by refusing to engage with negative thoughts and feelings. In mindfulness they can be present, but one must not focus upon them. It does seem however that some arguments can be made for seeing this discourse as an ethical one, as it relies heavily upon the notion of emancipation and the transformation of negative emotions into positive states of mind. What the discourse promotes is the correct use of one’s mind as a moral subject. The correct use is seen as that which prevents suffering for oneself and others. Due to the strong emphasis upon the role of rationality and reasoning of the mind in relationship to this discourse on the ethical usage of the brain in the books on self-improvement through neuroplasticity, I feel that there is much to be gained from attempting to site this project of self-improvement in a Kantian context.

In Foucault’s interview On the Genealogy of Ethics (2000) he describes how Kant represents a turning point in how the self relates to itself as a subject. Although Kant would no doubt criticise the ethical project of this discourse of self-improvement as being led by utilitarian self-interest rather than a universal moral law, in their descriptions of the origin and nature of evil (rather than evil, self-improvement will speak of the bad or the negative) they correspond with each other at several different points.

Where The Buddha’s Brain (2009) saw the over-identification with the self as the source of negativity, for Kant it is the nature of self-love, stating that “self-love, when adopted as the principle of all our maxims, is precisely the source of all evil” (2010b:66-67) [1793]. In the Groundwork of the metaphysics of Morals (2010a) [1785] Kant states that the rational being has:

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² I rely here on Joel Madore’s book Difficult Freedom and Radical Evil in Kant (2011) and his overview of Kantian ethics.
In other words, as in the discourse of self-improvement in this study, Kant states that the subject has a choice; one can see oneself as the product of nature, as obeying the natural laws, or one can see oneself as being above nature with the freedom to make one’s own decisions. The ability to act against one’s instincts or nature is the test of autonomy and the necessary condition of being a free subject, for Kant the “inevitable consequence of obstinately insisting upon the reality of appearances is to destroy all freedom” (2007:466) [1787]. The discourse of self-improvement here operates with a similar hermeneutics of suspicion, that the brain (or nature) is providing us with a virtual reality which must be penetrated by reason. Both discourses demand of the subject that they transcend experience and the world of appearances, yet stay within the realm of reason and morality. We can see here that in certain respects the discourse of self-improvement based on neuroplasticity is attempting to defend the free subject against the deterministic mechanism of biology.

It also seems possible to equate mindfulness as a goal with Kant’s notion of *selbstzufriedenheit* (2010:98) [1788] that describes a kind of self-contentment as a goal rather than sensual pleasure or long term aims. In the *Critique of Practical Reason* (2010) Kant describes self-contentment as “the negative satisfaction with one’s existence, in which one is conscious of needing nothing” (2010:98). In both cases the aim of the discourse is a state of mind where one is not steered by some form of craving or desire, but finds one’s mind in a state of rest that looks upon itself with compassion.

As in the discourse of self-improvement here, Kant describes the descent into evil/negativity/bad habits as beginning with the error of mistaking one voice for another. In the discourse of self improvement one mistakes the brain for oneself, in Kant we find “a rival voice, equally forcible, makes itself heard, one that I accept as being as authoritative as the call of duty” (2011:58), Kant refers to this propensity to evil as being “woven into human nature” (2010b:54), this propensity “is actually only the predisposition to desire an enjoyment which, when the subject has experienced it, arouses inclination to it” (2010b:52n). So we see that in both discourses we are dealing with a natural/biological inclination towards pleasure (or rather, release from torment or pain) that results in habitual behaviour. In both discourses we see this equation of desire with animality and nature. For both Kant and the discourse of self improvement this propensity is so seductive precisely because it appears to us as being
part of our reasoning or self, we mistake the desires of the brain for the reason of the mind. However, Kant would no doubt be suspicious of any discourse that passed the moral blame of individuals onto the brain rather than the self by saying “that wasn’t me, it was my brain!” Kant himself states that “I, the prosecutor and yet the accused as well, am the same human being (numero idem).” (1996:189n) [1797].

In many respects we can see lines of similarity between the discourse on masturbation that Foucault describes in *Abnormal* (2004) and the discourse on bad habits in the self-improvement books under examination here. In order to arrive at the “evil” state of being an onanist one needed to be seduced from the outside, while the individual is in a state of innocence an exterior force awakens the urge by tickling, scratching or direct seduction (2004:244). The narrative is repeated in the description of the development of habits in neuroplasticity, we are seduced into thinking that we are using our reason, when in fact it is the automatism of the brain, or we are affected from the outside by an intense experience for which we bear no responsibility. One might wonder, why is this discourse of originary innocence so important, why can there be no autopoeisis of evil in the human subject? I do not think that it should not be seen as a simple left-over from theodicy or humanist values. Instead I think we should see it as being related to the discourse of self-care and self-improvement, if human reason cannot be seen to be good-in-itself, then the whole project of self-analysis and self-improvement is undermined by an unreliable and unworthy constituter. This I feel is one of the main causes of the strenuous efforts of the discourse to separate the passive brain from the active mind.

Perhaps unexpectedly, Kant rejects the notion of radical ethical change through the exercise of reason alone:

> Education, examples, and teaching generally cannot bring about this firmness and persistence in principles gradually, but only, as it were, by an explosion that happens one time as a result of weariness at the unstable condition of instinct. (2006:194) [1798]

This usage of the notion of an explosion to bring about change brings us to Catherine Malabou’s thinking on the other meanings of the word plasticity, in the sense of plastic explosives (2008:5). Neuroplasticity means not just the transformation of forms, but also the potential for their complete destruction and loss, self-transformation also entails a certain amount of self-destruction. This notion of irreversible change is something not explored by the discourse on self-improvement through neuroplasticity.
7 Conclusion

“You must learn the principles in such a constant way that whenever your desires, appetites, and fears awake like barking dogs, the logos will speak like the voice of the master who silences his dogs with a single cry”. Here we have the idea of a logos functioning, as it were, without any intervention on your part; you have become the logos, or the logos has become you.

Michel Foucault, discussing Plutarch in The Ethics of the Concern for Self as a Practice of Freedom, (2000:286) [1984]

This study has looked at the forms of veridiction in the practices of self documentation, the use of the brain, emotions and bad habits as substances to be worked upon by the discourse and the well administered brain as the ideal of the discourse. In the work of Michel Foucault we see the ways in which discourse created the positions of subjectivity, in The History of Madness (2009a) we see the practices by which the position of the mad subject is created and enforced, in Discipline and Punish – The Birth of the Prison (1991) it is the criminal subject that undergoes a process of subjectivization. By moving from one book to another this study has demonstrated the ways in which the discourse invites the individual to take up the position of the mind-subject.

Although this study has focused upon the many differences between the actual books in the discourse on self-improvement and neuroplasticity there are several elements that unite the books that make it relevant to refer to them as forming a unified discourse. The first of these would be the relationship between the mind and brain, how they are separated from each other, constituted out of their differences to each other and how they are inserted into other already existing discourses on evolution, Buddhism, psychology and reason. An equally significant element is the mode of administrative care and the value placed upon the regulation of the brain. For all these books on self-improvement entails a movement from what the discourse sees as automatic and biologically lead behaviour towards rational long term aims. This project of self-improvement entails a process of desubjugation from the brain-led behaviour and reinstates the subject as the mind-subject, although how this mind-subject is formed differs somewhat between the books in this study. Another aspect that unites the books is their focus upon habits as a material to be transformed, it is the habits that form the material representations of the plasticity of mind.

As we see in Foucault’s work, the position of the subject is created in relationship to a field of objects (2002:257), knowing the brain is what enables an individual to become a mind. Foucault describes in an interview how his work has revolved around the transformation of
limit experiences into fields of knowledge (2002:257). In Foucault’s work experiences that occur outside the limits of reason are transformed into the fields of crime, madness and sexuality. An act of unreason, such as the murder of a complete stranger is transformed via discourse into an act of evil, insanity or perversion. Society cannot stand an affront to reason that seems to suggest something inhuman within the boundaries of humanity itself. We can regard the sensation of acting automatically, against one’s own reason or interests as a similar experience of the inhuman within our own thoughts and feelings. Here, rather than madness or perversion it is biology itself that becomes a field of knowledge, a vast array of networks and components. The individual constitutes themselves as the mind-subject by knowing the operations of the brain.

It can be seen from the discourse that complete and permanent mindfulness is not the ultimate aim of the discourse, but functions instead as something like a buffer that prevents sensations from becoming too intense. The discourse describes mindfulness as a way of disowning or disassociating oneself from thoughts and feelings, turning them into mind objects. Experiences take place upon a screen into which one does not step. Mindfulness serves a triple function here, it is the place from which the mind can view the activities of the brain, it is the buffer that prevents experiences from getting too intense and it is the tool by which one redirects the flows and relays of the brain by shutting off and redirecting the attention. Mindfulness functions somewhat like rational faith in Kantian discourse, believing or hoping for eternal life or a supreme judge allows ethical rationality to function without being plagued with doubts, here the belief that one can separate the mind and brain, that there is somewhere to go outside of the subject allows one to operate upon the brain without the nagging doubt that this in fact could just be another habit of the brain. Once the distinction is made between mind and brain one must enlist all possible modes of defence against its possible collapse. From this we can see how the mode of mindfulness might be described as being just another of the many functional subpersonalities created by the discourse.

While the telos of each book appears to have similar aims on the surface; to free the mind from the bondage of its biology, to reduce suffering and to nurture nature so that it functions at optimum, we can see that the methods and practices they employ means that the individual would end up at very different kinds of destination. In Buddha’s Brain (2009) we see the movement towards a Buddhist worldview, a stronger disavowal of the subject and a greater dedication to mindfulness. In CBT for Dummies (2007) we find an ideal individual under constant self surveillance and in a constant process of self documentation who has formed a new set of beliefs about themselves and is trying to put them into practice. In Rewire Your
Brain (2010) we find an ideal individual following a dietary regime in combination with sleeping practices and an exercise regime, not only that, but they also practice a lifestyle which encourages the maintenance of their brain, they partake in meditation and mindfulness, but have no great connection to Buddhism. In You Are Not Your Brain (2011) the ideal is that the individual has freed themselves from the bondage of the brain, they have learnt to differentiate between the negative brain reactions and processes and can either view them dispassionately or approach them rationally.

Although the discourse of self-improvement claims to put emphasis on the creative autonomy of the individual and their ability to master their own plasticity, this study has shown how the administrative technologies of the discourse enframe the experiences and thoughts in a way that reflects the society and culture in which we live. To this extent it seems possible that we might be able to see the discourse as a kind of />

The two discourses of neuroscience and Buddhism are enlisted in this project of self-improvement. Both discourses show us that what appears to be reality, is in fact an illusion, the emotions, desires and habits that we tend to identify with as belonging to us are described as nothing more than mechanisms or illusions of the brain. The discourse on self-improvement promises the freedom of mind to exercise its freedom, to define its own reality by attending to those things which it finds to be important rather than what the brain might force it to think or feel. The inclusion of neuroscience in the discourse of self-improvement is used as both a carrot and a stick, on the one hand, it shows that the self is nothing more than a mass of networks and processes reacting to stimuli, on the other hand if one is able to master these networks and processes it offers the individual a position of self mastery and emancipation. However, the only way that the subject can maintain this separation between the free mind and the biological brain is by constant self-administration, the constant surveillance and sorting of thoughts, feelings and habits by the use of the attention. It is a desubjugation dependant on constant self-subjection. This unification of Buddhist practices, CBT and healthy living practices such as diet, exercise and sleep regimes with the regime of scientific truth forms a dispositif that produces the split between mind and brain and regulates their relationship.
It is the *dispositif* that collates and assembles a series of ethical distinctions so that the end result is that the ethical substance is the origin of the thought or feeling, the question that the individual has to ask themselves is if the behaviour has originated in the mind or in the brain. We can see how this assemblage functions through the discourse in this study, how brain based behaviour is connected to evolutionary mechanisms, animality, automatism, short termed aims, how it is biased towards short termed aims and seeks temporary relief from suffering and that if it is left unregulated, it will form bad habits. We’ve seen how the mind is connected up to a notion of rationality, that the ethical question could equally be “was my behaviour rational?” If we return to the sexual act as our hypothetical ethical action we can hypothesise how it might be considered according to the books that have been examined in this study. The focus would no doubt be upon whether it was an action that originated in a mind-based rational desire or if it was some kind of brain-based coping strategy that was intended to bring temporary relief.

We can see how the usage of mindfulness brings an extra dimension to the notion of ethical substance in this discourse, in the discourse mindfulness stands for the ability to focus one’s attention. Looking back through the books in this study we can see how mindfulness functions as a kind of tool of the discourse, one uses it to focus upon what the discourse describes as positive and to distance oneself from that which the discourse views as negative. The ethical question according to the notion of mindfulness in the discourse might be “were you able to focus your attention on positive things? Could you distance yourself from negative thoughts and feelings?” One might see it as functioning as a kind of mind-brain barrier, yet more often we seem to see it at work to the sole advantage of mind. In terms of behaviour itself we can see a focus upon what might be called “anti-social behaviour” alongside that which the discourse of *CBT for Dummies* (2007) refers to as “self-destructive” behaviour such as the use of alcohol, drugs and gambling to bring temporary relief from suffering.

There is, no doubt, much to be gained from continuing this study into a closer examination of the development of Buddhist practices and their engagement with the West. Although there is plenty of evidence of the Dalai Lama’s interest in neuroscience, it would be interesting to see just how this relationship has developed. It would also be interesting to see how the notion of mindfulness that appears in the discourse has been used through history and how it relates to the notion of subjectivity. The wider role of these books in the media, the networks of interactions that are no doubt attached to them, both social and economic, could also form further paths for this study. Although I have made general comparisons to Christian discourse, it cannot be said that I have conducted any real engagement with the relationship between the
discourse of self-improvement and Christianity. Such an endeavour would have taken much more space than is available here, but it would certainly be worthwhile to study the relationship in further detail.

The discourse of neuroscience itself; the way the brain emerges through technology in the form of mappings, models and scans, the tests conducted and the reports compiled, could all be brought under examination to broaden the field to look at the relationship between mind and brain in further detail, the work of Bruno Latour in the field of science would no doubt be of use in those investigations. There is of course the question of what people actually do with these books, how they consume them, how they use them as tools and what other interactions occur between individuals and these books. A series of interviews or other documentary evidence could no doubt further this study in new directions. Whatever the limitations of this study, it is hoped that it contributes to the understanding of what it means to be a subject today and the relevance of neuroplasticity for the contemporary discourse on subjectivity.
Bibliography

Material


Sources


### Worksheet 1-4  Problem Clarification Checklist

- ✔ Anger problems
- ✔ Anorexia
- ✔ Binge eating or over-eating
- ✔ Body dysmorphic disorder
- ✔ Bulimia
- ✔ Chronic fatigue syndrome
- ✔ Chronic pain
- ✔ Depression
- ✔ Excessive use of alcohol
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>❑</td>
<td>Excessive use of non-prescription or ‘street’ drugs</td>
</tr>
<tr>
<td>❑</td>
<td>Feelings of low self-worth</td>
</tr>
<tr>
<td>❑</td>
<td>Gambling and on-line gambling</td>
</tr>
<tr>
<td>❑</td>
<td>Obsessive-compulsive disorder</td>
</tr>
<tr>
<td>❑</td>
<td>Ongoing feelings of guilt or shame</td>
</tr>
<tr>
<td>❑</td>
<td>Panic attacks</td>
</tr>
<tr>
<td>❑</td>
<td>Personality disorders</td>
</tr>
<tr>
<td>❑</td>
<td>Post-traumatic stress disorder</td>
</tr>
<tr>
<td>❑</td>
<td>Social phobia</td>
</tr>
<tr>
<td>❑</td>
<td>Specific phobias</td>
</tr>
<tr>
<td>❑</td>
<td>Spending excessive amounts of money</td>
</tr>
<tr>
<td>❑</td>
<td>Worrying all the time</td>
</tr>
<tr>
<td>Worksheet 1-7</td>
<td>Checklist of Bad Behaviours</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td></td>
<td>Self-destructive behaviours:</td>
</tr>
<tr>
<td></td>
<td>• Drinking excessively</td>
</tr>
<tr>
<td></td>
<td>• Eating poorly (too much or too little)</td>
</tr>
<tr>
<td></td>
<td>• Engaging in high-risk sexual activities</td>
</tr>
<tr>
<td></td>
<td>• Gambling</td>
</tr>
<tr>
<td></td>
<td>• Lashing out verbally or physically</td>
</tr>
<tr>
<td></td>
<td>• Spending money compulsively or recklessly</td>
</tr>
<tr>
<td></td>
<td>• Sulking</td>
</tr>
<tr>
<td></td>
<td>• Taking risks when angry (such as reckless driving)</td>
</tr>
</tbody>
</table>
Using illegal drugs

Mood-lowering behaviours:

- Isolating yourself from friends and family
- Letting daily chores mount up
- Neglecting your hygiene
- Not asking others for help or support
- Not engaging in activities you usually enjoy
-Repeatedly calling in sick at work
- Sleeping too much or too little
- Staying in bed all day
- Staying indoors most of the time
- Stopping taking your medication
Avoidance behaviours:

- Avoiding exercise
- Doing other unrelated tasks rather than doing what actually needs to be done (such as tidying your desk rather than writing an essay)
- Engaging in superstitious behaviour in an attempt to ward off feared events
- Not answering the phone
- Not opening post (such as bills)
- Not speaking much in social gatherings
- Putting off tasks
- Staying away from situations that you find threatening (lifts, busy places, parties, and so on)
- Using rituals to help quell anxious thoughts and feelings
### Worksheet 2-15

#### My Thought Record

<table>
<thead>
<tr>
<th>Situation/Event</th>
<th>My Thoughts</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>(What happened? When? Where? Who else was)</td>
<td>(What went through your mind at the time?)</td>
<td>(What was your feeling/ emotion? What did you do)</td>
</tr>
</tbody>
</table>
**Worksheet 4-1**

<table>
<thead>
<tr>
<th>Experiment Checklist</th>
</tr>
</thead>
<tbody>
<tr>
<td>❑ Have you identified the thought you want to test in a clear, testable fashion?</td>
</tr>
<tr>
<td>❑ Have you formulated an alternative theory or thought?</td>
</tr>
<tr>
<td>❑ Have you been specific about how, where, when, or with whom you will conduct your experiment?</td>
</tr>
<tr>
<td>❑ Is your experiment sufficiently challenging to help test your prediction?</td>
</tr>
<tr>
<td>❑ Is your experiment realistic and manageable?</td>
</tr>
<tr>
<td>❑ Have you considered what might interfere with the results of your experiment (such as safety behaviours, subtle avoidance, escaping from the situation), and planned to overcome them (such as by purposefully dropping a safety behaviour)? (See Chapter 7 for more on safety behaviours and other problematic coping strategies.)</td>
</tr>
<tr>
<td>❑ Is your experiment sufficiently long to gather the evidence you need to test out your thoughts? (For example, it would take, at the very least, 20 minutes to discover that your anxiety reduced within a situation.)</td>
</tr>
<tr>
<td>❑ Have you considered whether you need to carry out another experiment?</td>
</tr>
</tbody>
</table>
### Table 6-1  Action Tendencies of Healthy and Unhealthy Feelings

<table>
<thead>
<tr>
<th>Unhealthy Emotion</th>
<th>Action Tendencies</th>
<th>Healthy Emotion</th>
<th>Action Tendencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anger/rage</td>
<td>Shouting, being violent and abusive, putting the other person down. Insisting that you’re right.</td>
<td>Annoyance/anger</td>
<td>Asserting yourself in a respectful but firm manner. Not becoming abusive or violent. Being willing to consider the other person’s point of view.</td>
</tr>
<tr>
<td>Anxiety</td>
<td>Avoiding threat. Seeking excessive reassurance.</td>
<td>Concern</td>
<td>Facing up to threats. Seeking a reasonable amount of reassurance.</td>
</tr>
<tr>
<td>Depression</td>
<td>Withdrawing from social reinforcements and meaningful or enjoyed activities. Self-isolating.</td>
<td>Sadness</td>
<td>After a period of mourning and reflection, reinvesting in the company of others. Carrying on with meaningful or enjoyed activities.</td>
</tr>
<tr>
<td>Acidic envy</td>
<td>Spoiling another’s enjoyment of what you want but don’t have. Sour grapes. Pretending you don’t really want what they have.</td>
<td>Benign envy</td>
<td>Striving to gain what another has that you desire but don’t have. Allowing others to enjoy what they have without trying to spoil it for them. Admitting that you want what they have.</td>
</tr>
<tr>
<td>Guilt</td>
<td>Begging forgiveness from or avoiding facing the person you have wronged. Taking too much responsibility for the wrongdoing.</td>
<td>Remorse</td>
<td>Asking for forgiveness and facing up to the person you have wronged. Taking the correct amount of responsibility for the wrongdoing.</td>
</tr>
<tr>
<td>Hurt</td>
<td>Sulking. Trying to hint at what the other person has done wrong so they have to make the first move.</td>
<td>Disappointment</td>
<td>Voicing your feelings. Giving the other person a chance to explain or apologise. Being willing to make the first move.</td>
</tr>
<tr>
<td>Acidic jealousy</td>
<td>Spying or checking up on another person. Questioning them and setting tests for them. Being suspicious.</td>
<td>Benign jealousy</td>
<td>Asking honest and straightforward questions. Being open minded.</td>
</tr>
</tbody>
</table>

---

(v) (2007: 84-85)
| Shame         | Avoiding the gaze of others. Hiding away and withdrawing. | Regret       | Maintaining eye contact with others. Holding your head up and keeping in contact with others. |
# Worksheet 16-7  
## My Current Lifestyle Check-Up

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many (if any) days have I worked later than usual or taken work home with me?</td>
<td></td>
</tr>
<tr>
<td>How many times have I been out socially?</td>
<td></td>
</tr>
<tr>
<td>How many evenings/weekends have I allocated to spending time with friends and/or family?</td>
<td></td>
</tr>
<tr>
<td>How often have I taken some form of exercise?</td>
<td></td>
</tr>
<tr>
<td>How many hours/days have I spent on hobbies or activities that interest me?</td>
<td></td>
</tr>
<tr>
<td>How much time have I allocated to taking care of household duties?</td>
<td></td>
</tr>
<tr>
<td>How do I usually relax in the evenings?</td>
<td></td>
</tr>
<tr>
<td>How much time have I spent on self-help or continued CBT practice?</td>
<td></td>
</tr>
<tr>
<td>What other activities have I spent time on?</td>
<td></td>
</tr>
<tr>
<td>Which activities could I benefit from devoting more time to per week?</td>
<td></td>
</tr>
<tr>
<td>Which activities could I benefit from spending less time on per week?</td>
<td></td>
</tr>
<tr>
<td>Which times/days can I allocate to neglected activities in the coming week?</td>
<td></td>
</tr>
</tbody>
</table>
- ↓ Cardiovascular reactivity (Lepore, Allen, and Evans, 1993)
- ↓ Blood pressure (Spitzer, Llabre, Ironson, Gellman, and Schneiderman, 1992)
- ↓ Cortisol level (Kiecolt - Glaser, Rickers, George, Messick, Speicher, Garner, et al., 1984)
- ↓ Serum cholesterol (Thomas, Goodwin, and Goodwin, 1985)
- ↓ Vulnerability to catching a cold (Cohen, Doyle, Turnes, Alper, and Skoner, 2003)
- ↓ Depression (Russell and Cutrona, 1991)
- ↓ Anxiety (Cohen, 2004)
- Slowing down of cognitive decline (Bassuk, Glass, and Berekman, 1998)
- Improvement in sleep (Cohen, 2004)
- ↑ Natural killer cells (Kiecolt - Glaser, Rickers, George, Messick, Speicher, Garner, et al., 1984)
The following aspects of the “chemistry of love” give you those blissful feelings:

• At first sight, the PFC says, “Pay attention! This person is attractive.” This triggers your brain to discharge dopamine.
• The hippocampus records this memory of first sight.
• The nucleus accumbens (the pleasure and addiction centre) is activated with dopamine.

When you are separated too long from the one you love, you experience something akin to withdrawal symptoms.

• The septal region (another pleasure centre) is activated after dopamine triggers the excitement. This area is also activated during orgasm.
• You and your partner run the risk of developing a tolerance for dopamine. After the initial rush, there will be fewer dopamine receptors. You and your partner will have to create novelty to stimulate dopamine.

For example, when oxytocin is combined with dopamine (which occurs when excitement is rekindled through novel experiences), a long-term sense of love and commitment arises that feels exciting, safe, and fulfilling.