An investigation of beauty and contemporary painting:

Kant, Greenberg and Neuroscience

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by

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ABSTRACT

My motivation for my research stems from my practice as an abstract painter whose interests centre on form, pictorial space, surface quality and beauty in painting. For a long time I have been interested in the need for both freedom and restraint in the production of painting.

In my practice I use an unusual material, containing translucent silicon polymers, because it provides a beautiful surface quality for my work. This is difficult to use; it cannot be applied with brushes, and so I developed a simple semi-autonomous machine for producing an image on canvas. The machine enabled me to paint with silicon polymers, to achieve a beautiful surface, but it imposed very severe restraints on the form of the images. This difficulty compelled me to consider the problem of the conflict between autonomy and freedom at a practical level and that in turn led to a reflection on the nature of this problem at the intellectual and emotional level. This thesis is, in large part, my response to this conflict.

I begin my enquiry with a critical discussion of Greenberg's essay Modernist Painting in terms of the Kantian authority that he claims for it. I then turn to a critique of that Kantian authority itself. Common to both Greenberg and Kant is systematic argumentation in terms of wholly autonomous entities that makes a resolution of the conflict between freedom and necessity very difficult. In the second half of the thesis I use the concepts and empirical observations of affective neuroscience (which does not deal in autonomous entities) to develop my own theory of the beautiful and to use it as a critical tool in relation to both Kantian aesthetics and my own painting practice.

for Margaret

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CHAPTER ONE
INTRODUCTION

My motivation to write this thesis arose from difficulties that I experienced within my painting practice. I had chosen to work with material made from polymerised silicon esters that had been developed for industrial rather than artistic purposes. I chose this material for painting because of the beauty of its surface, a quality that I had discovered by accident when I was using the material to make a kinetic sculpture. The nature of the material, particularly its rapid setting time and unsuitability for being applied to canvas with brushes, meant that I needed to develop a machine, which would apply it to the entire canvas within a few minutes.

The machine consisted of an aluminium tray with a series of holes drilled in its base at regular intervals, suspended by wires from a wheeled gantry. The tray was filled with the coloured silicon material and set in motion like a pendulum. As the material poured out of the holes, the whole contrivance was pulled rapidly over the canvas, the tray oscillating at right angles to the direction of motion. The result was a series of identical wave patterns on the canvas. By repeating the process, but with the canvas itself rotated through ninety degrees I was able to form a regular pattern something like the classic modernist graph or grid to which Krauss (1981) refers. Unlike Krauss's famous grid, mine was made up of waveforms rather than straight lines.

I was delighted with the results because my grid of wave patterns was not pictorially flat like the modernist grid but appeared both three-dimensional and two-dimensional at the same time, depending on the viewer's changing spatial perception. This spatial ambiguity related to my long-standing preoccupation with pictorial space; it emphasised the active role of the beholding subject in perception and thus challenged modernism from a post-modernist position. At the same time the composition of the painting was evidently modernist.

My initial pleasure in all of this quickly waned as I realised that I had come face to face with the modernist dilemma: the conflicting demands of the requirement for both repetition and innovation in painting practice. I had some control over the wavelength and amplitude of the waveforms produced through varying the speed of the machine over the canvas and the frequency of the oscillating drip bar. Apart from

that, the machine controlled me because all it would produce was either straight lines or waveforms. The machine was semi-autonomous but so was I. On the one hand the nature of the material had forced me to give up much of my own freedom as an artist; on the other, relinquishing part of that freedom was necessary if I wanted to use the material at all. Moreover, this situation had arisen as a result of my desire for beauty in painting; perhaps the relation between desire for beauty and freedom was more complex than I had previously realised.

I considered designing a new machine that allowed me more freedom, but on reflection I decided that what was needed was to internalise the function of restraint within myself. That raised the question of deciding and prioritising those aspects of painting that were of most value to me, what really mattered to me as an artist at the visual, conceptual and emotional level. I realised that I already knew the answer, it was beauty: the feeling of sheer joy in simply seeing certain objects in nature or in art. I abandoned my machine and, for a while, my painting practice too. I read about other people's ideas of beauty, particularly those of Immanuel Kant, whose questions, values and motivations seemed very similar to my own. I had not read Kant before and found his work wonderful and difficult, like beauty itself, like the feelings that we have and which we call beauty. Although I ultimately disagree with many of his detailed conclusions, I retain a great admiration for his methodology and motivation. He remains very influential in this thesis.

In my reading of Kant I came to recognise the similarity between the problems of reconciling my artistic freedom with the restraints imposed on my work by using a largely autonomous painting machine, and the problems experienced by Kant in constructing a systematic philosophy based on the autonomous categories of quantity, quality, modality and relation. The consequences of Kant's choice of discrete and autonomous categories as the basis for his work are discussed in detail as this thesis develops. Here, I simply want to draw attention to the parallel between Kant's attempt to reconcile the phenomenal subject, based on arguments of necessity in his First Critique, with the noumenal subject that is wholly morally autonomous (free) of his Second Critique, and my own attempt to relate the necessities of modernism and the freedom of post-modernism in my own painting practice.

In his Third Critique Kant attempts to bring the phenomenal and noumenal together in the human through his theory of beauty. Likewise in this thesis I try to do

something broadly similar in terms of both theory and painting practice through my development of a theory of beauty that both supports and contests that of Kant. I choose a different ground, one based on contemporary neuroscience, to Kant's chosen appeal to the supersensible substrate of humanity and phenomena to explore and partially resolve the conflict between necessity and freedom. The arguments deployed by Kant and by me are technical. In this thesis I give brief explanations of technical terms, whether philosophical or scientific, as they arise.

I decided to start my investigation with a study of Clement Greenberg's (1960) essay Modernist Painting. That essay epitomises the late modernist attitude to artists and the beholders of their work: it largely ignores them. It is a great essay in its felicity of expression, power of argument, and visual acuity. Its great achievement is to push the modernist aesthetic to its limit. Its ultimate failure is, I suggest, to remain there, because, by definition, a limit is the point of failure. I believed Modernist Painting to evidence both the best and the worst of modernism as a cultural, political and economic paradigm. It seemed a good place to start.

<u>The methodology and structure of the written element of the thesis</u>

Chapter Two is a critique of Clement Greenberg's seminal essay, Modernist Painting, written in 1960. In that work Greenberg cites Kant as the authority for what he claims to be his self-critical conditions for the autonomy and quality of painting in modernism. He also claims that painting must remain aesthetic. Many of the established criticisms of Greenberg have focused on Greenberg's implied claim that his conditions for painting are consistent with Kantian aesthetics; that is to say, they have critiqued Modernist Painting from the standpoint of Kant's Third Critique or from a critical appraisal of modernism in general.

For example, Rosalind Krauss (1981) criticises Greenberg through her general resistance to the modernist suppression of cultural and gender differences. Krauss challenges modernism's claim to supposedly value-free foundational premises. She exposes modernism's claim to a utopian and apolitical freedom as leading to something more like a dystopian tyranny of repression and exclusion of the cultural, historical and gendered specificities of the individual person. She regards the certainties of modernism, its supposed philosophical and disciplinary rigour, as a masquerade covering what she calls its failure of engagement with art as being to do with humanity in its diverse actuality. Krauss identifies this failure of engagement of modernist painting with the opacity of its flat painted surfaces to representation, to

narrative, to anything that is to do with the human and lies outside the flat pictorial field. This flatness of both the substrate of painting and pictorial space is the foundational, the originary principle upon which Greenberg's conditions for the autonomy and singularity of painting in modernism rest.

Krauss identifies this modernist origin of perceived flatness as the privileged term of painting, and representation as the suppressed one. She then goes on to argue that this supposed origin of singularity and autonomy is no more than a reified signifier that is itself contingent on multiple representations in painting of both flatness and non-flatness of pictorial space. Krauss has been very influential on my own way of thinking in relation to modernism and I am much indebted to her work. Her claim that the modernist origin is not singular but is itself contingent on the multiple representations of space throughout the history of painting situates her work alongside that of Michael Fried.

Although Fried (1966) supports Greenberg's emphasis on the flatness of the material substrate in modernist painting, part of his project is to elevate the producer and beholder of painting to a position of at least equal importance to that of the object that is the painting. Fried sees the history of painting as an internal dialectic between successive styles rather than a response to the socio-political and economic issues within society at large. Fried (1967) draws attention, however, to the need for producing artists to recognise their situatedness in art discourse in as objective terms as they are able to achieve, and it is that insistence that leads him to his preoccupation with ensuring an anti-theatrical aspect within painting practice. However, the ongoing historical debate in painting that focuses on theatricality is ultimately about the relationship that pertains between the artwork, its producer and its beholder. Since two of these three constituents of the relationship are people, individuals with their own culturally and historically constituted convictions, it is difficult to see, I suggest, how objectivity can be achieved in this situation. There is, I claim, an ongoing tension, a dissonance, in Fried's writing between his desire to reconcile modernist painting to the objective nature of its substrate and the subjective nature of its history, its producers and its beholders. Fried appears to believe that the nature of the substrate, its flatness, is given by the object alone and is not constituted at all by the beholding subject. That autonomous conception of subject and object is, I claim, a large part of the difficulty within his work; it also parallels his conception of different art practices as found or discovered entities (rather than

socially constructed discourses) autonomous from each other and art in general as an autonomous domain from that of ordinary objects.

At issue in all of this is the conflict between sameness and the other, between, in contemporary language, ipseity and alterity, and between freedom and necessity. Fried is very relevant to this thesis because these are also my preoccupations. That relevance is not confined to the practical level of my painting but extends to my critique of Kant in Chapter Three.

Fried (1966, p18-27) is able to resolve the aporetic aspect of his critical writing on painting only by insisting that painting carries conviction through "shape as such". These concepts have often been criticised, as being ill defined, overly metaphysical or even quasi-religious. It is interesting to note here that one might level these accusations (as, in broad terms, I do) at the Kantian idea of the transcendental subject. The value of Fried's work was to shift the criticality of painting away from the Greenbergian obsession with the empirical nature of its substrate and include within it an equally significant role for the producing and beholding subjects. Flatness and non-flatness of pictorial space became a matter for negotiation rather than prescription.

Thierry de Duve (1999) situates his discussion of Greenberg's work within his stated overall project, which is to undertake an archaeological exploration of art in modernity in much the same way as Michel Foucault undertook his exploration of the global episteme of the classical age. A consequence of that positioning of his project, is de Duve's contention that Greenberg's essay Modernist Painting reflects the author's own taste, a taste that has evolved under the same pressures as modernist painting practice itself. I agree with that view, but would put it more forcibly because Greenberg puts forward his conditions for the autonomy and quality of painting as a neutral account of the history of painting. There is, I claim, no such thing as a neutral, in the sense of ideologically free, account of the history of painting or anything else. The claim for the neutrality of history is itself ideologically situated in modernism. The point that I am making here is that Greenberg's conditions for painting do not simply reflect his own taste; they are determined by it. What is more, they result in a negation, a complete arrest, of the history of painting to which he refers.

A central argument of de Duve is that there is no such thing as modernism at large. What he means by this is that modernism is about constructing disciplinary boundaries specific to each discipline within art, thus ensuring the complete separation, the autonomy, of each within the generic practice that we call art. I would add to that, the remark that what is common or generic to art is what is shared between and amongst its separate disciplines; if we isolate each discipline from that we end up with disciplines but not art disciplines. De Duve is concerned to maintain the flatness of painting in modernism as a valuable trait rather than a prescriptive condition for painting to be painting within modernist terms. At the same time he wants to maintain painting as an aesthetic experience. I whole-heartedly support that project. The method that de Duve employs to achieve his goal is to resort to a modified form of the Kantian resolution of the antinomy of taste. The conflict is between the Kantian thesis that the judgement of taste is not based upon concepts, for if it were, it would be open to dispute (decision by means of proofs) and the antithesis, which is that the judgement of taste is based on concepts.

De Duve replaces the words "judgement of taste" by the word "art" in the antinomy above but in other respects his resolution of the antinomy proceeds along the same lines as Kant (1790, prop 56, 57, Bernard edition, p230-235). The thesis becomes "the judgement of taste (now art) is not based on *determinate* concepts", and the antithesis becomes "the judgement of taste (now art) is based on an *indeterminate* one (viz, of the supersensible substrate of phenomena and humanity)." I have several problems with de Duve's modified Kantian resolution of the antinomy. Firstly the supersensible substrate of phenomena cannot properly be isolated from that of humanity as de Duve does (without comment on this separation). That is because the latter is a constituent, in Kantian terms, of the former. Secondly, the Greenbergian thesis, that is his conditions for painting in modernism, evidently is a determinate and not an indeterminate concept because it is an analytic identity. For the same reason the Kantian antithesis, which is indeterminate, cannot encompass Greenberg's conditions. Thirdly the Kantian resolution of the antinomy is only achieved through his use of the transcendental subject that is indispensable to the supersensible substrate. Although I share de Duve's ambition to retain what is of value in the Greenbergian conditions for painting as an historical trait, I do have reservations about the argument that he uses. As I discuss later, there are problems with the invariant and culturally homogenous nature of Kant's transcendental subject that lead me to reject it as the ground to unify the phenomenal and the noumenal in the human through my own theory of beauty.

I have given a very brief review of the work of those who I consider to be the most important critics of Greenberg (and by implication, some aspects of Kant too) because I want to situate my own criticism within the established critical tradition. I also want to show how my project in this thesis differs from the established critiques of Greenberg.

In my critique of Greenberg's work, I examine Modernist Painting mainly from the point of view of Kant's First Critique. Greenberg implicitly appeals to the self-critical methodology of the Critique of Pure Reason to legitimate his conditions for the disciplinary autonomy of painting in modernism. I want to critique Greenberg immanently, and it is his concern for the autonomy of painting from other art practices that defines his project in Modernist Painting. In Chapter Two, therefore, I examine the spatial arguments that Greenberg puts forward in that essay and compare them to the Kantian pure a priori intuitions of space and time that are so crucial to his self-critical methodology. I also explore the relation between Greenberg's use of analogy and that of Kant. More importantly, I examine the claim implicit in Modernist Painting: that to establish the self-identity of painting is to establish its self-criticality and autonomy. I draw attention to incompatibilities between Greenberg's ideas and Kantian methodology in all of these areas. My concern in Chapter Two is not to reject Greenberg's emphasis on the importance of flat pictorial space but to re-establish it as a trait in the evolution of painting that still has value, rather than as a prescriptive condition for the inclusion of artworks on canvas or board within the discourse of painting.

Throughout Chapter Two I accept, without question, the authority of Kant in order to construct a critique of Greenberg within the legitimating paradigm to which he appeals for validation of his own ideas. In Chapter Three, however, I critically examine that Kantian authority. To do that I consider the methodology and content of Kant's critical trilogy as a whole because to relate the reflective judgement of taste and his taxonomy of beauty developed in the Third Critique to the critical methodology and determinate judgements of the First Critique, it is necessary to refer to the moral philosophy of his Second Critique. That, however, is not my only reason for including his moral theory in my discussion. More importantly, although I comment on the difficulties and aporiai within Kant's work, I want to keep his claim for beauty as an analogical symbol of morality within my own theory of beauty that I develop in this thesis; I want the estimation of beauty to remain a matter for reasoned

discussion and consensual agreement. I do not want it to be a private report on sensation or desire, to be merely a means to the fulfilment of self-interest as opposed to the interests of society. In short, I want a limited form of Kantian autonomy that does not collapse into individual self-interest and the domination of nature over freedom. To avoid that, I still need beauty to retain a moral moment within itself, for otherwise beauty cannot be distinguished from individual corporeal desire.

In this chapter, the conflict between necessity and freedom that motivated me to write this thesis emerges with full force at the intellectual, social, and emotional and aesthetic levels. This is not the place to discuss the details of the arguments that I make in Chapter Three. Here, I only wish to say that I am unable to resolve this conflict to my own satisfaction within the systematic philosophy and methodology of Kant that is based on his autonomous categories. The problem is, I claim, based on the central role of autonomy in Kant's work. For that reason I need to look elsewhere for a discursive practice that will allow me to retain Kant's emphasis on form as opposed to content and on the ethical aspect of beauty that flows from the shared reflective form of his moral and aesthetical judgements. At the same time I need a discursive practice that is not based on relations between wholly autonomous entities such as the Kantian faculties of mind and categories. Yet I require a discourse that is capable of providing something like Kant's universality and sensus communis for the social construction of the beautiful.

In Chapter Four I make a fundamental move from the propositional philosophy of modernism to the pragmatic practices of contemporary neuroscience in order to find a discursive practice upon which I can ground my ideas about beauty. My appeal to neuroscience also marks a turn from modernist to postmodernist critique in my thesis. Yet I claim that my appeal to contemporary science for legitimation of the methodology of my critique of beauty is analogous to Kant's appeal to the science of his day as the authority for his critical methodology in his First Critique. Just as Kant sought to limit the speculations of metaphysics by knowledge obtained in experience of the phenomenal world, so I want to limit philosophical introspection about our feelings of pleasure in relation to particular objects that we call beautiful by the specificities of our biology, especially that of our embodied brains as described by neuroscience. The analogy that I make here to Kant's methodological appeal to

Copernican cosmology[1] is important to me because I want to stress that my move here is a methodological and not an ontological one and I want it to be critical in the same sense that Kant uses that term. I do not, however, regard the role of neuroscience within this thesis in merely negative terms of limitation; I believe that it also has a very positive and enabling role in affording us new opportunities for our creative imagination.

Chapter Four examines issues of commensurability between the discourses of philosophy and science. It does not claim that the brain is the mind but only that it may be useful to suppose some correlation between the activities of mind and embodied brain. In this respect, and to a degree, my thesis echoes Spinozan philosophy.

For Spinoza, it is the dynamical relation between mind, body and world rather than causality between them that is important, together with the persistence in time of a unitary self. These preoccupations are echoed some three centuries later in the reflexive dynamical operation between mind, body and world described by contemporary neuroscience. In particular, neuroscience relies upon the biological idea of homeostasis as a means to survival that is very similar to the Spinozan idea of the persistence of the unitary self.

An important function of this chapter is to review the narrative that neuroscience provides of brain structure. Neuroscience is interested in understanding the organs of the brain in the traditional sense of observing which part of the brain performs what general function. Crucially however, it does not regard the organs of the brain as discrete entities that function autonomously. It is much more interested in the dynamical functional operations *between* the different parts of the brain, which are recursive and reflexive in their form. In anticipation that many of the readers of my thesis will not be specialists in neuroscience, I have sought to limit the sometimes very technical arguments of neuroscience as far as is consistent with required

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[1] Before Copernicus, people had assumed that the celestial bodies revolved around the earth. Copernicus proposed, as a purely methodological move, that they only appear to do so because the earth, rather than the celestial bodies, is revolving. That supposition marked a fundamental shift in our understanding of cosmology - and much else besides - from one considered in terms of active objects to one thought of in terms of active experiencing subjects. Kant adopted Copernican methodology and developed from it his own revolution in epistemology and self-critical methodology. Kant explains our knowledge of apparently independently constituted objects of experience in terms of our (subjective) mode of cognition. The notion of the reality of objects as independent from us is replaced by the idea of objects as they appear to us. See Appendix Two of Chapter Two for a more detailed explanation of Kant's "Copernican Revolution".

accuracy and rigour. Like any other discourse, neuroscience contains theoretical models that differ, to varying degree, in the particulars of their conclusions. In Chapter Four I review both the cognitivist-passivist and the positivist-pragmatic theories of perception. These models are not mutually exclusive and both are useful. I make it clear that I consider the positivist-pragmatist model to be the more useful of the two for this thesis.

Chapter Five uses the basic neuroscientific information and theory provided by the previous chapter but re-focuses the discussion onto affective neuroscience. It concentrates on the biological role of pleasure and displeasure as both the motivation and reward for intentional actions that enhance the well being of the subject.

This chapter discusses the supposition of neuroscience that our basic emotions and our feelings of pleasure and displeasure evolved in our brains as the means of ensuring our survival in the constantly changing conditions within our bodies and in the world beyond them. I use that idea as the ultimate ground for my theory of embodied beauty. Beauty, as the subjective feeling of pleasure predicated by us onto mental or physical objects thus becomes crucially important to our well-being and survival. It is the common pathway in which all motivations for intentional action, including conflicting motivations for different possible actions, are resolved and converge. This theory is discussed at length and in detail because of its central role in my thesis as the explanation of how it is that we take pleasure in some objects and ideas and not in others. The difficulty remains of why we take pleasure in stimuli that have no direct physiological link to survival and well-being. We may reasonably presume that the pleasure that we take in art objects such as, for example, abstract paintings, did not evolve but is culturally learned. Pleasure is, in neuroscientific terms, the stimulus and reward for all actions including mental ones. We therefore obtain pleasure from the process of re-predication as such; our embodied feelings of pleasure remain the same but it is pleasurable for us to relearn new stimuli on which to predicate them. Learning, particularly social learning, is pleasurable in itself not only for humans but also for many other vertebrates.

The idea of pleasure as the common currency of all intentional action is important in Chapter Five because it enables me to construct an economic theory of beauty as indispensable to the organisation of all our physical and mental activities. This commonality of pleasure and displeasure provides the basis for my claim for the

inter-subjectivity of beauty that is essential to link it to both cognitive and moral (Kantian) judgements; it provides something like Kant's sensus communis for beauty. The legitimation for that claim is that the observations of neuroscience provide the evidence for it. Neurological studies have shown that the affects of pleasure and displeasure are indispensable to the basic dynamical operations and functions of the normal brain and are common to all of us. That does not mean that we all think and feel in exactly the same way, but that we have the capacity to do so if we consensually choose to. The analogy to Kantian judgements is clear. Unlike Kant, neuroscience has no need of a transcendental subject or the supersensible substrate of humanity and phenomena to provide universality and inter-subjective consensual agreement for its theories about a unified thinking and feeling subject.

Chapter Five both supports and contests Kantian aesthetics. It broadly supports Kant's universal claim for his different judgements but it strongly contests his claim for their autonomy. The evidence of recent investigations of affective neuroscience clearly show that pleasure and desire are linked together, that any absolute distinction between them is semantic rather than scientific. Neuroscience also clearly shows that the information upon which reason operates is always and already emotionally mediated; and that reason in turn mediates the gestalt processes by which complex emotions and feelings are constructed.

In Chapter Five I draw attention to the extremely complex recursive and reflexive dynamical operations of the brain, which are not reducible to the traditional philosophical concepts of linear or circular causality. I show how these observed brain dynamics render the idea of the autonomous nature of faculties of mind, judgements, and the domain of beauty untenable within the paradigm of neuroscience.

Chapter Six, the concluding one, summarises the implications of my neuroscientific critique of Kantian aesthetics. The major implication is that beauty is no longer entirely disinterested and apart from reference to objects. That conclusion, together with the irrelevance of the Kantian supersensible substrate to neuroscience, renders redundant arguments in aesthetics that revolve around the Kantian antinomy of taste.

The implications of that for Kant's Analytic and Deduction of the Beautiful are unpacked here, as are the implications for his reflective aesthetic judgement of taste. My aim here is not to demolish Kantian aesthetics but to begin to re-inscribe it with a

limited objective moment through reference to the observed reflexive and recursive form of the operations of the brain. Form is the crucial concept here; it both contests and supports Kantian aesthetics. It is just as important to neuroscience, if not more so, than it is to Kant. As Kant moves through his critical trilogy his use of form changes in parallel with the judgements that he develops in each critique. By the end of his Third Critique the reflective form of aesthetic judgement hints at the future possibility, in a system of thought that does not rely on autonomous categories, of the reflexive and recursive forms of thinking that are now common in neuroscience and other discursive practices. The reflexive form of neuroscience links it to the contemporary philosophical interest in ipseity and alterity, to the post-modern fascination with the *fold.*

In Chapter Six I return to a discussion of my own practice as a painter in the light of the matters discussed in my thesis. I explain my use of very simple images to allude to the very complex subjective play of perception in relation to our experience of pictorial space. I hope that my perceptual play with our construction of space in painting may encourage us to reflect on the complex dynamical relations between our own thoughts, values and feelings.

CHAPTER TWO

GREENBERG AND KANT'S CRITIQUE OF PURE REASON

What, then, are space and time? Are they real existences? Are they only determinations or relations of things, yet such as would belong to things even if they were not intuited? Or are space and time such that they belong only to the form of intuition, and therefore to the subjective constitution of our mind, apart from which they could not be ascribed to anything whatsoever?

Immanuel Kant (1781/87)
The Introduction to the Transcendental Aesthetic (CPR, A23/B37-8)

It was the stressing, however, of the ineluctable flatness of the support that remained most fundamental in the processes by which pictorial art criticised and defined itself under modernism. Flatness alone was unique and exclusive to that art. The enclosing shape of the support was a limiting condition, or norm, that was shared with the art of the theatre; colour was a norm or means shared with sculpture as well as the theatre. Flatness, two-dimensionality, was the only condition that painting shared with no other art, and so painting oriented itself to flatness as it did to nothing else.

Clement Greenberg (1960/65)
Modernist Painting

In this chapter I discuss Clement Greenberg's essay Modernist Painting[2] in which he sets out his critical project. I have chosen to critique this essay because it has been so influential in the development of a late modernist criticality of painting, particularly formalist painting. As such it is directly relevant to my own formalist painting practice.

Greenberg appeals to Kantian philosophical and methodological authority to support the ideas he expresses in Modernist Painting. He does not explicitly state that his appeal is to Kant's First Critique, but the arguments that he deploys in his essay make it clear that Kant's First Critique is the focus of his attention.

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[2] There are two versions of this essay, the first published in 1960 and the second in 1965. The later essay is a slight revision of the original version with some additional text. The two essays are very similar. I quote from both because the later version reflects Greenberg's considered position and was published at a time when his influence was at its peak.

There are several advantages to critiquing Modernist Painting principally in reference to Kant's First Critique. Firstly, Greenberg is entitled to be criticised within terms that he appeals to rather than in terms that apparently did not interest him. Secondly, criticism of Greenberg from the standpoint of Kant's Third Critique is by now a well-trodden path. Criticism of Modernist Painting within the terms of Kant's First Critique has not received so much attention.

Because I came to Kant's First Critique by way of his Third Critique, I had to look at the Second Critique to make sense of the relationship between Kant's other two Critiques. My attempt to relate all three Critiques to each other within immanently Kantian terms and my reference to neo-Kantian re-inscriptions of Kantian aesthetics, particularly my reading of Theodor Adorno, significantly changes my position in relation to Kant and his work; a change that is important for the next chapter of this thesis.

This shift of positioning in my relation to Kant has been important for me. It has enabled me to see that the creative play between concept and imagination in Kant's writing, avoiding as it does a collapse into pre-Kantian idealism or empiricism, is a process that has clear parallels in the production of visual art. The production and reception of art requires, for Kant, a balance between concept, to which form is proximate, and intuitions given in sensation, which stimulate imagination and elicit affective response. It is characteristic of Kantian philosophy and of art that both avoid total closure around either concept or sensation; both avoid the subsumption of the intellectual and the sensual by their dichotomous partner.

In this chapter my use of Kant is more restricted; I confine myself to a criticism of Greenberg's Modernist Painting in terms that are almost always limited to Kant's First Critique. The exception is a brief excursion into Kant's moral philosophy because I consider it so relevant to Greenberg's preoccupation with autonomy. No reference to Kant's Third critique is made in this chapter, though such reference is made in following chapters. My general conclusion in this chapter is that, ultimately, Greenberg does not manage to maintain a balance between the a priori (conceptual) and the a posteriori (empirical) aspects of his argumentation, but instead collapses into a methodological and philosophical position that is too close to pre-critical empiricism for him to adequately sustain his appeal to Kantian authority

Greenberg's conditions for painting in modernism

Greenberg develops his conditions for the autonomy of painting in order to establish criteria for the achievement of quality in modernist painting. He regards the limitations imposed by the medium of each particular art practice as crucial to the achievement of quality in the productions of that practice. For Greenberg then, each art form establishes its unique and proper area of competence in terms of what is unique to the nature of its medium. If modernist painting is to achieve this competence, Greenberg argues, it must share nothing with any other art form; in particular it must share nothing with sculpture. As Greenberg (1960, para.11) writes,

> *Three-dimensionality is the province of sculpture, and for the sake of its own autonomy painting has had above all to divest itself of everything it might share with sculpture.*

Autonomy, then, is an explicit and central concern for Greenberg, who also insists that painting be self-critical. In Modernist Painting his conditions for both the autonomy and the self-criticality of painting are the same: the fidelity of practice, in its representations, to the nature of its material medium.

The central enquiry of this chapter is to examine, not the disciplinary success of Greenberg's work, but the form of his argumentation in terms of its compatibility with Kantian thought at the methodological and the philosophical level. There are, I claim, problems with Modernist Painting at both of these levels, and I am interested in them because they may be a useful point of departure for new considerations in painting. They may allow an opening out of the Greenbergian discipline of painting rather than a closure of it around a point of certainty or refutation.

I now want to state my own critical position in relation to Modernist Painting. I am critiquing that essay from the point of view of the authority that Greenberg claims for it: the self-critical philosophy and methodology of Kant. There are two reasons for my choice of that position. Firstly, I feel that Greenberg is entitled to be critiqued within his own terms of reference. Secondly, I want my criticism of Modernist Painting to be immanent to both Greenberg and the Kantian authority that he claims for his essay. In this chapter, therefore, I accept uncritically Kantian methodological and philosophical authority.

Kant's work, however, is open to more than one established exegesis, as Gardner (1999, Ch.2) points out. Broadly speaking, the analytic tradition (P F Strawson[3]) emphasises the transcendental arguments of Kant and is therefore indispensable to establishing the compatibility of his three Critiques. Strawson sees the value of Kant's work as flowing from his transcendental arguments, and he regards as relatively unimportant the analogy of Kant's epistemic reversal to the Copernican revolution (see Appendix Two).

The idealist tradition (Dieter Henrich[4]) is more concerned with Kant's Copernican revolution and hence his solution of the Critical Problem in terms that do not rely on transcendental argumentation. I shall make use of both these interpretations of Kant's work because they are complementary within the context of this chapter of my thesis.

At the beginning of Modernist Painting, Greenberg makes clear that what is to follow is based on what he describes as the self-critical tendency of Immanuel Kant. For Greenberg (1960, para.1), Kant is "the first real modernist". He especially admires Kant's use of critique to re-configure the boundaries of logical discourse in order to make logic more secure within its own, albeit reduced, remit. For example, Greenberg (1965, para.2) remarks that,

> *Kant used logic to establish the limits of logic, and while he withdrew much from its old jurisdiction, logic was left in all the more secure possession of what remained to it.*

He clearly intends to do for painting what Kant did (as interpreted by Greenberg) for philosophy. Greenberg's project is to apply Kantian procedures of logic to painting in order to establish, on disciplinary grounds, the conditions for the autonomy of

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[3] "There are limits to what we can conceive of, or make intelligible to ourselves, as a possible general structure of experience. The investigation of these limits, the investigation of a set of ideas which forms the limiting framework of all our thought about the world and experience of the world, is, evidently, an important and interesting philosophical undertaking. No philosopher has made a more strenuous attempt on it than Kant." (P F Strawson, quoted in Gardner, 1999, p31)

[4] "Such an account (of the constitution of the world) requires reference to the operations of the mind, without which the world in question would not be disclosed to us and could not possibly adapt its shape. In this way Kant explained nature and the world of nature by means of rules that guide the synthetic activities we must exert on what is given to us in sensation.

But the source from which the world originates is equally dependent on that world. Initially it might seem that the principle by which we are capable of accounting for a world remains independent of what it accounts for. Close investigation, however, discovers that, unless it executes the activities from which a world originated, the principle itself would be incomprehensible. This kind of investigation is distinctive to the method of Kant's epistemology that he calls transcendental." (Dieter Henrich, quoted in Gardner, 1999, p31-32)

painting from other art practices and from non-art objects. His concern is to secure the purity of painting as a discursive discipline.

Greenberg's appeal to Kant can authoritatively legitimate his work provided that the appeal can be sustained at the philosophical level, or at the level of Kant's self-critical methodology, and not simply at the common sense (contingent) level of Kant's project. Put another way, suppose we imagine that Greenberg's essay had contained no explicit reference to Kant. Would a reader who had read Kant's First Critique, conclude that Modernist Painting was analogous, as Greenberg (1965, para.15) claims that it is, to Kant's self-critical work in its structure of argumentation in general and in its epistemological stance in particular? In other words does Greenberg enquire, prior to asking what is given in experience by the object that is the painting (and by the depicted objects within the painting), into the constitutive role of the Kantian subject in the experience? This chapter tries to answer these questions.

<u>Greenberg's analogous claim to Kantian authority</u>

Greenberg's appeal (1965, para.16) to Kantian self-criticality is implicit throughout Modernist Painting and is made explicitly and in analogical terms when he writes that,

> *Kantian self-criticism finds its perfect expression in science rather than in philosophy, and when this kind of self-criticism was applied to art the latter was brought closer to scientific method than ever before.... That visual art should confine itself exclusively to what is given in visual experience, and make no reference to anything in other orders of experience, is a notion whose only justification lies, notionally, in scientific method.... Analogously, modernist painting asks that a literary theme be translated into strictly optical, two-dimensional terms before becoming the subject of art.*

Greenberg is claiming here his conditions for painting in modernism derive analogically from art's proximity to scientific method, which in turn is the perfect expression of Kantian self-criticism. Additionally, he is claiming that the practical implications of this analogical requirement are that painting is "strictly optical" and pictorial space is two-dimensional. I want to examine these claims in detail, but first want to examine the analogical relationship that Greenberg claims to exist between his conditions for painting and Kantian self-criticism.

The whole question of the analogical relationship of Greenberg's critical conditions for modernist painting to Kantian critical philosophy is a difficult one. As Caygill (1995, p63-67) points out, Kant is generally unenthusiastic about the employment of analogy other than to relate the sensible to the supersensible. Kant does not consider it legitimate to use analogy as if it gave us knowledge of objects in general, though analogy is permitted as an aid to self-understanding in our relation to objects such as God. Kant also claims that cognition by analogy,

> *...does not signify (as is commonly understood) an imperfect similarity of two similar things but a perfect similarity of relations between two quite dissimilar things.*
>
> (Kant, 1783, Prolegomena, quoted by Caygill, 1995, p66)

This definition of analogy is counter-intuitive. In everyday usage we think of an analogy[5] as an imperfect relationship between two similar things.

It is difficult to immediately reach a conclusive global view of the analogical relation between Kant's First Critique and Greenberg's essay Modernist Painting. Therefore, in trying to examine the analogical relationship between Greenberg's essay Modernist Painting and Kant's self-critical philosophy, I believe that I need to ask quite specific questions such as,

"Is the relation of pictorial space in painting to the objects that are paintings for Greenberg perfectly similar to the relation of space in the world to the objects that are the real[6] world for Kant?"

I claim the answer to this question is that it is not. The reasons for this conclusion are discussed in detail later in this chapter, and so I only want to point out here that pictorial space for Greenberg is given a posteriori by the objects depicted within the painting[7], whereas for Kant, space is given by the pure a priori intuitions of the subject and is not derived through experience of real objects in the world, or of

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[5] In referring to analogy in the Kantian context I am referring to Kant's concept of analogy in general rather than in terms of what he calls the analogies of experience. These latter analogies are principles that govern the objective use of the categories of relation, particularly as to how things appear to be related in time.

[6] I am using the word real here in the sense of existent but not absolutely existent, see Appendix One for the Kantian technical terms used here.

[7] Greenberg later qualifies objects in painting as recognisable objects and representations of objects. He does not explicitly distinguish between a thing being three-dimensional because that is the way it is "in itself" and being so because (as Kant claims) that is the way humans apprehend the thing in its immediate presentation to them (intuition). He appears to believe that objects or relations between them determine our perception of space rather than that such objects are always and already qualified for us by our spatio-temporal encoding of them.

relations between them. For Kant, our experience of objects in the world (see appendix one) depends on the judgement of sensibility, which is synthetic a priori; in addition to the pure a priori intuitions of space, empirical intuitions of sensation from the object are required.

Returning now to the question that I asked above, we see that the relation between the antecedent terms is a posteriori to a posteriori whereas the relationship of the consequent terms is pure a priori to synthetic a priori. Because the relationship between antecedent and between consequent terms is not perfectly similar, I believe that the analogy does not hold in Kantian terms. There is however, another, different conclusion to be drawn from examining this false analogy. Both the (Greenbergian) antecedent terms are the same; they are both given a posteriori. The consequent (Kantian) terms are subtly different. They are both a priori but one of them, the real objects in the world, is synthetic a priori, that is to say the term is valid for the world of objects because it contains an objective as well as a subjective moment. The Kantian half of the analogy is self-critical because it does not refer to a relation of sameness, ipseity, between its terms. Rather, that relation is in terms of sameness and otherness (alterity). This is important because Kantian self-criticality cannot be had in a relation based only in sameness, but only in a relation that encompasses ipseity and alterity together. A priori principles must look beyond themselves to a posteriori experience that contains within itself objective as well as subjective constituents, if it is to be Kantianly self-critical. Kant makes that abundantly clear in the opening paragraphs of his Preface to the first edition of the Critique of Pure Reason.

> *... and it is my task to answer the question how far reason can go, without the material presented and the aid furnished by experience.*
>
> (Kant 1781 AXiii)

I therefore maintain that Greenberg's claim that his conditions for painting in modernism are analogically related to Kant's methodology is unsustainable, and so is his claim to Kantian self-criticality.

Had we considered the question that I ask above in terms of the everyday (non-Kantian) meaning of analogy, that two things are more or less the same, broadly similar, in their relation, we might have reached a very different conclusion. For Kant, however, analogy is not a vague form of similarity but a precisely defined tool of logic. If Greenberg is to analogously claim Kantian authority for his work in general, I think it is reasonable to expect him to use the term analogy in the same sense that

Kant does. That may seem a harsh requirement, but I justify it on the grounds that it is to the precise, limiting argumentation of Kantian methodology that Greenberg makes his appeal for the authority of his own work.

Before leaving this discussion of Kantian analogy between the work of Greenberg and Kant's First Critique, there is another question that I want to consider: "Is the limitation of painting by reference to its material substrate a critical move for Greenberg in a perfectly similar way to the limitation of reason by reference to experience is a critical move for Kant?" I have, in a sense, answered that question already, but there is another aspect to it, which, I claim, arises from Greenberg's fundamental misinterpretation of the Kantian project in the Critique of Pure Reason. As I have remarked before, at the beginning of Modernist Painting, Greenberg (1965, para.2) writes,

> *Kant used logic to establish the limits of logic…so that logic was left in all the more secure possession of what remained to it.*

That is not an accurate description of the Kantian critical project because Kant (1781, CPR. 1st edition, Preface, para. 10) makes it very clear that he is using experience and the nature of knowledge itself to limit reason.

> *… it is my task to answer the question how far reason can go, without the material presented and the aid furnished by experience… the aims set before us are not arbitrarily proposed, but are imposed on us by the nature of knowledge itself, this being the subject matter of our critical enquiry.*

A few paragraphs later Kant goes on to state that,

> *…. the question is, what and how much can reason and understanding, apart from experience, know? And not, how is the faculty of thought possible?*

The criticism that I am making of Greenberg's interpretation here is important because Kant completely rejected the traditional view that logic could limit logic (as he put it, that reason could limit reason). He saw that assumption as the cause of all the confusion and endless disputation in metaphysics and as the source of dogmatism. Kant (1787, Bxvii, p16) did not see the structure of experience as merely a set of logically connected truths, but claimed that,

> *Experience is itself a species of knowledge that involves understanding.*

According to Kant, neither sensation nor concept are individually sufficient for knowledge but together are both necessary and sufficient for knowledge; sense experience provides the content and concept provides the form. The manner in

which sensory experience and form are combined is what Kant calls a synthetic a priori judgement.[8]

I have spent some time describing why I have challenged and reconfigured Greenberg's claim that Kant uses "logic to limit logic" because there is nothing to be gained by Greenberg from an analogical claim between his own project and Kant's project that is based on what Kant did not claim.

Returning now to the analogy made above, we might ask, "Is the limitation of painting by reference to its material substrate a critical move for Greenberg in a perfectly similar way to the limitation of reason by reference to experience is a critical move for Kant?"

This analogy might well hold if experience, like reason, was reducible to a sequence of logically connected statements but for Kant, as we have just seen, it is not. The antecedent part of the analogy contains two terms that are empirical objects, given in sensation for Greenberg. The consequent part relates an a priori term, reason, to experience that in addition to an a priori ground (space and time) also has an a posteriori ground and thus is synthetic a priori.

Once again, the relationship between the antecedent and consequent terms is not perfectly similar but is significantly dissimilar and the analogy fails in Kantian terms. The problem has arisen, not so much because there is anything wrong with the terms used, but because the relation between terms has not been examined in regard to the grounds or principles that inform those terms and hence the relations between them. The relation of the antecedent terms is analytic; as such it is not, for Kant, a critical relation (by definition an analytic term is one of ipseity alone). The relation of the consequent terms is critical in the Kantian sense because the first term, reason, is related to, and limited by, the second term, experience, which is a synthetic and reflexive term. Experience is not in an analytic relation to reason; were it so, it could not limit reason. Once again Greenberg's terms evidence ipseity alone and Kant's encompass ipseity and alterity.

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[8] See Appendix One for Chapter Two for a discussion of such judgments and of the judgment of sensibility.

Greenberg's claim to Kantian Methodology

There are I believe, significant problems in the claim that Greenberg's work is analogous to Kant's not only at the philosophical level but at the methodological level too. I believe an explanation of these analogical difficulties is to be found in Kant's statement of the Critical Problem, when in writing to his friend Marcus Hertz in 1772 he stated that,

> *I asked myself: What is the ground of the relation of that in us which we call "representation" to the object?*

Kant suggests that we should conduct our enquiry into the problem as if the object conforms to our cognition and not as if our cognition conforms to the object (see appendix 2). My underlining here is to emphasise the strictly methodological and hence metaphysically/ontologically independent nature of Kant's argument at this early stage of his First Critique. Kant goes on to develop the substantive claim later and commits us philosophically, rather than methodologically, to a transcendentally idealist conception of objects. Previous pre-critical knowledge assumed that *"our knowledge must conform to objects"* but Kant (1787) now asks that we *"must make trial"* and *"suppose that objects must conform to our knowledge"* (CPR, Preface. Bxvi).

The use of the term "make trial" is interesting here. It emphasises the experimental nature of the enterprise; Kant is not making any substantive claim as to what is. The term also refers to trial in the juridical sense. The enquiry is to be de jure rather than de facto. This is a matter of experimental procedures that make, as yet, no philosophical claims and so is methodological. As Gardner (1999, p45) points out,

> *The philosophical method which runs alongside transcendental idealism bears no resemblance to the rationalist's inspection of clear and distinct ideas or of the principle of sufficient reason, or to the empiricist's anatomy* (a reference to Locke's (1689) Essay Concerning Human Understanding.) *of sense experience...it consists in the identification of what Kant calls "conditions of possibility", or transcendental conditions that must be fulfilled prior to the subject being epistemically related to the object* (Gardner, 1999 p45).

Kant makes no attempt to philosophically prove these transcendental arguments at this stage. Kant's statement of the critical problem is the basis on which his self-critical methodology is built; as such it is indispensable to the Kantian system of

thought. There is, I claim, nothing in Greenberg's arguments in Modernist Painting that correlates to Kant's critical move in referring representations of objects to subjective grounds. Greenberg does not investigate his assumption that the experience of pictorial space is given in sensation from the objects, or from relations between objects, depicted in painting. There is no Greenbergian equivalent to Kant's celebrated critical question to his friend Marcus Hertz.

Greenberg's idea of self-criticality as self- identification and autonomy in painting

Greenberg (1965, para. 5) writes that,

> *It quickly emerged that the unique and proper area of competence of each art coincided with all that was unique to the nature of its medium. The task of self-criticism became to eliminate from the effects of each art...every effect that might conceivably be borrowed from ...any other art. Thereby each art would be rendered "pure", and in its purity find the guarantee of its quality as well as of its independence. "Purity" meant self-definition, and the enterprise of self-criticism in the arts became one of self-definition with a vengeance.*

Greenberg is interested in the self-critical methodology of Kant's argumentation above all else and the central project of Greenberg's essay is to apply that methodology to the discursive practices of art, particularly to painting. I am interested in the extent to which Greenberg succeeds in that ambition which, I suggest, depends on the degree to which his procedures emulate those of Kant. Reflecting on the quotation from Greenberg immediately above, it appears that Greenberg equates the concepts of self-definition, purity and the autonomy of each particular art practice from other such practices with Kantian self-criticality. I question the legitimacy of that identification for the reasons that I give below. For Greenberg then, the autonomy of each art practice is to be found in its purity and that purity in turn is identified with the unique nature of the medium of each practice; Greenberg distinguishes between the different art media in terms of our spatial experience of them as if that experience was given entirely by the empirical nature of the objects that we behold. Autonomy for Greenberg is, I claim, a notion that is to be discovered a posteriori from objects.

I want to compare Kant's use of the term autonomy with that of Greenberg; does Greenberg mean the same thing by autonomy as Kant does? This question matters because the notion of autonomy is crucial for Greenberg's claim to Kantian self-criticality as the legitimating ground for his conditions for painting in modernism.

Kant uses the word autonomy in two senses. Firstly, his entire project is constructed in terms of autonomous categories and of judgements that correlate to those categories and are thus autonomous from each other. Kant inherited that tradition of philosophical argumentation from Aristotle, for whom categories were different ways of making judgements and of talking about being. That tradition persisted in Kant's time largely because scholars were thoroughly familiar with it and because of the enormous authority in philosophical discourse accorded to Aristotle. In his First Critique Kant radically reconfigured the Aristotelian categories, reducing their number to four[9] and, unlike Aristotle, he gave a deduction for the necessity of each of them. Kant's re-interpretation and reduction of the categories had the advantage of providing a simpler yet more secure logical basis for philosophical argument that was still commensurate with the established thought of his immediate predecessors. It had the disadvantage, as will become apparent later in this thesis, that his arguments and judgements still relied on the notion of autonomous categories. There are two broad implications in all of this for Greenberg: Kantian categories are not objective properties but remain distinct subjective ways of experiencing objects, and space and time are no longer categories at all, but are universal and wholly subjective operations of mind.[10] Given that, it is very difficult to see how Greenberg's notion of autonomy as being "all that was unique to the nature of its (the art object's) medium" is compatible, or even commensurate, with the categorical meaning of autonomy for Kant.

Greenberg relies very heavily on the spatial dimensionality of the medium of painting and of sculpture to construct autonomous disciplinary practices for both. In Modernist Painting, the concept of spatial dimensionality defines the terms of his arguments. Yet, as we have seen, such spatio-temporal terms are no longer categories for Kant. Therefore the argument that Greenberg makes in terms of autonomy as grounded in spatial considerations cannot refer to the autonomy between Kant's categories. It must rely instead on the idea that the spatial nature of sculpture is somehow entirely different from that of painting, an idea that distinguishes sculpture from painting in terms of their objective nature and, since there is no reference to the role of an experiencing subject, only in terms of their objective nature. I return to this question of spatial representations in more detail at

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[9] The remaining categories were Quantity, Quality, Modality (broadly form) and Relation.

[10] Space and time, for Kant, are the formal a priori structures of our power of cognition, and are not in any way derived from objects, or relations between objects, a posteriori.

the end of this chapter, but at this stage want only to say that I believe that Greenberg assumed that space is a property of objects in themselves or in their relation to each other.

Greenberg is entitled to hold any view of the nature of space that he chooses, including an empiricist one. The problem, as I see it, is that such a view makes it extremely difficult for him to establish his theory of painting in terms that are self-critical in Kantian terms, as distinct from the simple analytic identity that is self-definition; a distinction mentioned before in the context of Greenberg's claim that Kant used "logic to limit the remit of logic".

I am not making the same point now as I did previously, when I stated that Kant did not claim that he used logic to limit its own remit. Rather, I want to make the point that the claim of self-definition — which Greenberg certainly sustains here in empiricist terms — is not, in itself, the same as a claim for self-criticality. This is not because the claim contains empiricist terms but because it contains no other (in this case subjective) terms that allow a claim to establish a reflexive self-critical relation to itself. To sustain a claim to Kantian self-criticality, a claim must contain a heteronomous moment to that which it claims to be self-critical; it must contain alterity as well as ipseity. Thus Kant, realising he could not limit reason and make it self-critical in terms that were purely rational, sought to refer reason to something that was not only reason. Though recognising that reason contained a rational moment, he limited it by (only partially subjective) Kantian experience, which has an objective moment too.

I am not criticising Greenberg for his choice of an empirical ground for his arguments for paintings' self-definition, but I am criticising him for conflating self-definition with Kantian self-criticality. It is not so much that I think that he ought to start from an a priori ground for the self-criticality of painting, but that he should recognise that he can't do without one if he proceeds from a posteriori grounds, as he does, and at the same time, claim Kantian self-criticality for his argument.

I now want to see if Greenberg might be using the term autonomy in the second of the ways that Kant does: as the idea of moral freedom.

Greenbergian autonomy and Kant's moral theory

So far I have criticised Greenberg's notion of autonomy between different art practices but a similar argument also applies to Greenberg's claim to establish the autonomy of art objects in general from non-art objects, for art as an autonomous domain. In both cases, the idea of autonomy as an objective term is problematic for the claim to Kantian authority as legitimation of the ideas expressed in Modernist Painting. Ultimately these problems derive from the inconsistency between Greenberg's notion of autonomy as an objective property and the subjective nature of Kant's categories and of his subjective conditions, space and time, for the possibility of our epistemic relation to objects of any sort. So far then, we have only considered Greenbergian and Kantian autonomy in terms of our phenomenal relation to objects. Although Kant considers humans as phenomenal objects he also considers us as noumena, as ends in ourselves and not simply as means to an end. This aspect of humanity is the basis for Kant's moral philosophy, set out in his Second Critique. The notion of autonomy as transcendental freedom is indispensable to Kant's moral philosophy. This freedom is both freedom from an externally given authority and freedom to legislate our own maxims, our own rules of action in the world, decided rationally and apart from objective determination. The project of Kant's moral philosophy is not the question of what can we know about the world,[11] but the question of how we ought to be, how we ought to act, in the world.

It might be argued that painting is an action in the world that involves reasoned decisions and that Greenberg's conditions for painting are, analogously, moral arguments in Kantian terms, about how painting ought to be; that Greenberg is constructing an analogical moral theory of painting and is thus using the term autonomy as Kant uses it in the second part of his critical trilogy. This argument is somewhat outside the strict remit of this chapter, in that it refers to Kant's Second Critique and not his First Critique. Nevertheless, I think that the argument deserves serious consideration and ought to be addressed in a chapter that focuses on Greenberg. The argument goes along the following lines. Painting is, analogically, the Kantian moral subject. The empirical experience (what is given in sensation alone) becomes the objective ground, and the disciplinary necessities of painting defining itself as separate from other arts and non-art objects become (again analogically) the principle that tells us what paintings ought to be, what they ought to look like. Together these elements make up the "analogously moral system"

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[11] This is basically the subject matter of his First Critique.

described in Modernist Painting. Thus Greenberg can claim Kantian moral autonomy for his ideas in an analogically meaningful way.

My objection to this argument is that the "disciplinary necessities", on which it relies, are not grounded in a priori reason, as are Kant's moral maxims. Rather the ground of these "necessities" is indistinguishable from the "empirical experience" that they are supposed to supplement, to rationally validate. The argument is like a synthetic a priori one in which the a priori principle turns out to rely on the a posteriori experience of the world that it is supposed to rationally legitimate. Necessities, be they disciplinary or not, must be a priori to experience, and to what is given in empirical sensation. Unless this is so, the whole exercise collapses into an identity between painting, rules for the self-definition of the discipline of painting - to which painting is to be an instrumental exemplar - and empirical intuitions, which are the a posteriori ground for those same rules. If there is an a priori element, it is no more than the analytic relationship of identity between the elements that make up this moral system; and these analytic relationships are objectively determined. The argument is instrumentally constructed to exemplify what painting already objectively is, not what it rationally, and apart from objective reference, ought to be. The argument does not have the reflective form of the Kantian moral (or the aesthetical) judgement.

There is another reason why the above moral system is not, analogously, a Kantian moral system. It is that the Greenbergian system issues rigid rules, or laws, for the proper modernist moral action in the world that is painting; that alone precludes Greenbergian modernist painting from being art in the Kantian sense, because for Kant there is no rule for the production of art save for the free *ingenium* of the producing artist. Moreover, these rules, which are grounded in empirical conditions, are instrumentally directed to achieve a disciplinary end that can only be fulfilled and recognised in empirical terms. Kant's moral system is based on a very strong notion of human freedom, which seeks to establish,

> *The reality of transcendental freedom, according to which the human will is a capacity for spontaneous activity, or a kind of causal power, which is independent of determination by empirical conditions.*
>
> (Gregor, 1997, Introduction, page x.)

I cannot see how the Greenbergian moral system for painting outlined above is compatible with, or analogous to, the Kantian notion of transcendental freedom that is indispensable to both his idea of the moral action and to his aesthetical judgement of taste that stands as an analogical symbol of the moral. Greenberg's conditions for

painting's autonomy and quality describe the events taking place in modernist painting at that time as causally determined by the material substrate of paintings, he sees paintings only as phenomenal objects, as one might view inanimate objects in nature. He is entitled to do that, but unless he is also prepared to view paintings as noumena, as things in themselves, without antecedent conditions from which they follow of necessity, it precludes even the possibility of transcendentally free causality and hence a claim to moral autonomy in the Kantian sense. For Kant, the moral law is a principal for autonomy, and for Kant moral principles are to be abstracted from their matter (such as interests based on desires that ultimately refer to empirical conditions), so that all that remains is their <u>form</u>, and it is this form, as a maxim free of matter, that alone determines the will. It follows that an agent able to act from reasons that are based only on the legislative form of a maxim, is a free and hence autonomous agent and can act independently of empirical conditions. The Kantian moral law requires that the agent act from the principle that expresses the nature of practical reason, free from all external authority. For Kant, such a way of acting <u>is</u> autonomy. For Greenberg, there is no painter as free agent because the objective nature of substrate of painting becomes both the "objective principle" and the external (to the pictorial image within the painting) authority.

Indispensable to Kantian autonomy is the transcendentally free subject, a subject free to act independently of empirical conditions as an antecedent cause or a predetermined end[12] for action in the world. Greenberg elevates the flatness of the stretched up canvas to a position of such importance that it becomes an antecedent cause for a predetermined end, which is the flatness of the image on the canvas. Because Greenberg appears to regard spatiality as given in sensation by objects or by the relations between objects, flatness, which is a spatial concept, becomes objectively determined, and this effectively precludes the subject having a role in the system and acting independently of empirical conditions to provide the form of an a priori principle that is needed to bring the system into compatibility with the Kantian moral system.

The foregoing includes a very brief outline of Kant's moral philosophy, a subject that I shall return to in Chapter Three. It is included briefly here because it is the crucial point at which my philosophical and my artistic positions come together. As an artist,

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[12] This freedom of moral judgment from a predetermined end is shared with the Kantian judgement of taste, and is discussed more fully in the next chapter in the context of beauty having the form of purposiveness but being apart from purpose.

especially as a painter, the motivation for my criticism of Greenberg is my antipathy to the degree of constraint that Greenberg's conditions for proper modernist painting place on my practice, if, and only if, I accept them as ineluctable conclusions of reason. I recognise the importance of restraint in painting and the importance of painting's acknowledgment of, rather than determination by, the constraint that results from the nature of its own material substrate. To be an autonomous painter, to make paintings that are not merely exemplars of a particular disciplinary position, is important to me because although I accept that painters should inform themselves about other discourses, I believe that painting is a visual modality in its own right rather than philosophy by other means. At the same time, rationality is also important to me, and with qualifications, I admire and accept Kant's contribution to our understanding of the scope and limits of reason. It is of great importance to me, therefore, to examine and understand the tight linkage that Greenberg claims between his conditions for painting and Kant's procedures of argumentation and philosophical position.

My purpose in this chapter is to neither defend nor contest Kantian authority, but only to consider whether Greenberg's claim for it in Modernist Painting is sustainable. I recognise that autonomy is problematic for Kant too; it creates serious difficulties for the unity of his critical trilogy, and his efforts to resolve those problems have a significant influence on his theory of beauty.[13] However, the fact that the notion of autonomy proves problematic for both Greenberg and Kant does not imply that they both mean the same thing when they use the term, or even that they have different but compatible conceptions of it. I claim that Greenberg's use of the term autonomy is incompatible with Kant's usage of the term in the contexts of both his First and Second Critiques.

The problematic aspects of autonomy, together with possible means of resolving them, are a theme that runs throughout this thesis. For that reason I want to consider the difficulties that Greenberg encounters with autonomy in some detail in this chapter. As I have already mentioned, Greenberg appears to associate very closely the idea of autonomy with the ideas of self-criticality and self-definition. My criticism of Greenberg is that his association of these terms is too close and gives the impression that self-definition and autonomy are sufficient for a claim to Kantian self-criticality. I suggest that this is not so for the following reasons.

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[13] I discuss this matter in detail in the next chapter.

It is extremely difficult, even impossible, to be critical in the Kantian sense without accepting the implications of the reversal of epistemic relations between subject and object at the methodological level and, at the philosophical level, without accepting Kant's transcendental argumentation as well, which ultimately requires the positing of the transcendental subject. However, self-criticality may be had quite independently of a transcendental subject.[14] Given Greenberg's empiricist positioning, it is not surprising, perhaps, that he is disinclined to make any appeal to Kant's transcendental subject. Had he been prepared, in Modernist Painting, to make some sort of explicit reference to the role that the active Kantian subject plays in the world as we experience it, his appeal to Kantian self-criticality would have been easier to sustain at a purely methodological level.

Greenberg has chosen a difficult path to follow in Modernist Painting. Without any appeal to Kant's transcendental subject or to the active subject of his epistemic revolution, there are simply no Kantian subjective grounds left for him. Without such grounds, without the reflexive relationship between subject and object in human experience, Greenberg's theory has only the empirical intuitions of sensation to consider. These do not suffice for Kantian self-criticality. Neither do they suffice for Kantian epistemology, which in the absence of a transcendental subject is indispensable for any meaningful appeal to Kantian methodology.

The mutual dependence of intuitions and concepts is an absolutely fundamental proposition of Kant's epistemology. Yet this mutual dependence does not imply the assimilation of intuitions and concepts to one another, as does rationalism, which reduces the distinction between intellectual and sensory representations to the point where these terms become synonymous. Neither does this mutual dependence of intuitions and concept support empiricism that seeks to derive the material of thought from sensory data. Greenberg's approach to these issues is very close to empiricism indeed. This ensures that Greenberg is, in philosophical terms, pre-critical. Paradoxically, this has resulted from Greenberg's preoccupation with autonomy, because he has made the object completely autonomous from the subject, a move that makes it very difficult to sustain his claim to be proximate to Kant's critical philosophy and methodology, given that Kant makes the subject constitutive of objects, thus establishing the subject as the origin of experience.

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[14] As mentioned at the beginning of this chapter, the idealist (Henrich) tradition of Kant exegesis considers Kant's solution to the Critical Problem in terms of his Copernican epistemic revolution (that does not rely in any way on a posited transcendental subject) to suffice for this purpose.

Greenberg's project is directed to establishing a visual autonomy for painting and visuality is clearly something to do with a beholding subject. This beholding subject needs to be assigned a role in visual experience. Kant assigns the subject a very active role in all experience, going so far as to make the subject a condition for the very possibility of experience of the world. Greenberg, as an empiricist, gives the subject a very passive role, because for empiricists objects are the origin of experience. Although Greenberg must surely recognise that visuality requires a subject, it is very hard for him to actually find a specific and active function for the subject in his argumentation, given his empiricist stance. This would not be so acute a problem had he not appealed to Kant for legitimation of his arguments; had he appealed to pre-critical philosophy, for example, or refrained from philosophical appeal altogether, it would not be a problem at all. As it is, the passive role of Greenberg's subject weakens his claim that his conditions for autonomy and quality in painting provide the authority of Kantian self-criticality for his ideas expressed in Modernist Painting.

It is interesting to see how Greenberg's preoccupation with autonomy has come about. In Modernist Painting Greenberg reworks the theme developed twenty years previously in his essay (Greenberg, 1940) entitled Towards a Newer Laocoon. In that essay, Greenberg also sought to distinguish between the different art practices in modernism and establish conditions for quality in production within each practice, by reference to the medium specific to each practice. In the context of painting, he describes the evolution of an increasingly shallow pictorial space as painting in modernism evolved. In this early essay, Greenberg did not claim any particular philosophical authority for his views, but the tone of his remarks, particularly in his defence of abstract painting is, to a limited extent, Hegelian. He claims that the tendency of modernist painting to adopt an increasingly shallow pictorial space is both inexorable and progressive in historical terms. Twenty years later, in Modernist Painting, he replaces history as the ground for his arguments by the authority of Kantian self-critical methodology and philosophy. Kantian authority is used to push the arguments made in Towards a Newer Laocoon to their logical conclusion in Modernist Painting. The flatness of pictorial space is no longer seen merely as a useful aid to achieve an increase of autonomy and quality in modernist painting but as the determining condition for a painting to be modernist at all. The change is from recommendation to prescription, thus proscribing for artists, in their productions, the

enjoyment of autonomy as freedom developed by Kant in his Second and Third Critiques.

Greenberg's requirement that modernist pictorial space be two-dimensional

I now want to examine in detail Clement Greenberg's conditions for the autonomy and quality of painting, which are grounded in his privileging of two-dimensional, or flat, pictorial space. This, Greenberg claims, is the necessary condition for painting to achieve its independence from sculpture and achieve its place in modernity. Pictorial space is crucial to Greenberg's arguments. Space is also crucial to Kant's development of the judgement of sensibility that explains how objects are possible for us as experiencing subjects. The universal and formal structures of mind, space and time, which are necessary (that is to say a priori in Kantian terms) for any experience and knowledge of the object, play an indispensable role in the First Critique's Introduction to the Transcendental Aesthetic and to the development of Kant's transcendental idealism. Given the importance of space to both Greenberg's conditions for modernist painting and to the development of Kant's critical philosophy, it is worthwhile to examine what both Kant and Greenberg conceive space to be.

I recognise that Greenberg is interested in pictorial space and Kant is interested in space in the real world in general, though not, it should be stressed, in an absolutely existent real world. Both Greenberg and Kant are interested in representations of space; Greenberg is interested in pictorial representations. Kant has a more general interest in representations, because he claims that we have no access to a world that is apart from our representations of that world. Kant claims that our representations require formal structures in us rather than in the world, and we represent these formal structures within ourselves as space and time. An interesting question is, therefore, "Do they both mean the same thing, or at least something very similar, when they write in terms of representations?"

This is a complex and difficult question that I want to postpone until I have examined what they both have to say about the nature of space in relation to objects and the experiencing subject. My enquiry presupposes that Kant's universal formal structures of mind, his pure a priori intuitions of space and time that enable us to experience objects at all, perform the same function in the same way for paintings and the objects depicted within paintings, as they do for the rest of the world. There are two reasons for my making this assumption: firstly it seems improbable to me that we have different formal structures of mind for objects in paintings and objects in the

world at large. Secondly, Kant (1787, p50) would seem to lend support to this view in his Metaphysical Exposition of the Concept of Space when he writes that,

> *Space is not an empirical concept which has been derived from outward experience...Consequently, the representation of space cannot be borrowed from the relations of external phenomena through experience; but, on the contrary, this external experience is itself only possible through the said antecedent representation.*
>
> (CPR, A23/ B37)

I accept that Greenberg is writing of experience of space in paintings, but Kant is also talking about experience, albeit in the world in general; my point is that all Kantian experience is contingent on the unitary, universal and subjective nature of space. The question therefore arises as to whether Greenberg's notion of pictorial space can be accommodated within the Kantian notion of space. At first sight it might appear that both authorities, since they use the term representation, understand space in the same way. The problem remains that these representations refer to very different origins: in Greenberg's case to objects and in Kant's case to subjects. If, in visual experience, we cannot distinguish between these two originary sources, either one of which might be the explanation of the representations that we make to ourselves, does it matter that there are two possible origins of our experience? Is this all just to do with philosophical sophistication that is irrelevant to the visual experience of painting? In an important sense it is. It doesn't matter, in itself, that Greenberg assumes space to be determined by objects, in themselves, or in their relations. These sorts of beliefs do not influence, let alone determine, our immediate response to painting.

There is, however, another sense in which the origins of these representations matter a great deal. The subject as the origin of experience is crucial to Kant's entire critical project, for reasons that I have already touched upon and will examine in more detail below. It is important to emphasise that although Kant makes the subject the necessary condition for all experience, he does not claim it as a sufficient one. Empirical intuitions, given in sensation are the sufficient Kantian conditions for an experience of the world, an experience that is disordered and is not our experience of the world, which is an ordered experience. Kant claims we cannot experience a world other than the world that we experience and that empirical intuitions together

with our pure a priori intuitions of space and time together enable us[15] to experience the world as we do. The point that I am making here is that Kant's theory of experience, and epistemology too, is not purely idealistic or rational. It contains an empirical moment through its recognition that empirical intuitions are needed for our experience of the world as we experience it. The world, for Kant, is not produced by our thought alone. This significant empirical and phenomenal aspect of Kantian thought allows Greenberg the possibility of inclusion in the Kantian system of experience, provided there is a subjective moment within the Greenbergian system of experience of painting that is heteronomous to the predominantly empiricist positioning of his project. What is needed from Greenberg is a subjective limit to his empiricism that is analogous to Kant's objective limit on his idealism.

In Modernist Painting Greenberg (1965, para 8) writes,

> *It was the stressing, however, of the ineluctable flatness of the support that remained most fundamental in the processes by which pictorial art criticised and defined itself under modernism. Flatness alone was unique and exclusive to that art. The enclosing shape of the support was a limiting condition, or norm, that was shared with the art of the theatre; colour was a norm or means shared with sculpture as well as the theatre. Flatness, two-dimensionality, was the only condition that painting shared with no other art, and so painting oriented itself to flatness as it did to nothing else.*

In this quotation, Greenberg makes it clear that flatness, the two-dimensionality of the support of painting is the ground from which his whole argument will proceed because it is the flatness of the substrate of painting that is the only aspect of painting that is wholly autonomous from all other art practices. At this stage, Greenberg is not talking about representations of flatness, the objects depicted within painting, pictorial space as such or the experience of painting by the beholding subject. He is simply grounding the argument in empirical terms for disciplinary reasons as he is entitled to do.

Two paragraphs after the quotation given above, Greenberg (1965) makes it clear that the ideas expressed in Modernist Painting are concerned with representations of "recognisable" objects.

> *It is not in principle that modernist painting in its latest phase has abandoned the representation of recognisable objects. What it has abandoned in*

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[15] Kant claims, additionally, that both empirical intuitions and our pure a priori ones are both necessary and sufficient for us to experience objects in the world as we do.

principle is the representation of the kind of space that recognisable, three-dimensional objects can inhabit.

The question immediately arises as to the sense in which Greenberg is using the term representation. It may be that he is referring to objective or subjective representations of recognisable objects. Given the general empirical stance of Greenberg, one might reasonably assume that he is talking about objective representations, but this remains an assumption. Against that assumption is the fact that Greenberg is talking about "recognisable" entities, which might be a reference to an experiencing subject who is providing the function (including the formal, subjective a priori intuitions of space and time) of recognition; this might be an implicit reference to the subjective construction of space. This point of view is also an assumption. Moreover, even if we accept that in his use of the term representation, Greenberg is referring to an experiencing subject, that does not necessarily mean that he is referring to the Kantian subject's pure a priori intuitions of space and time. In Modernist Painting Greenberg appears to hold the view that space is absolutely existent, ready, as it were, to receive recognisable objects placed in it, and to also believe that the manifold multiplicity of space is determined by objects or relations between objects placed in it. Leaving aside the inconsistency of these two notions of space, it remains that neither view of space is consistent with Kant's view that space is the representation we make to ourselves of the purely formal ability that we have which relates the perceiving subject to its objects, and which is quite apart from concept and sensation. Kant's notion of space and time is fundamental to his theory of how we relate to objects in experience, to perception and to conscious representations. Given that Greenberg's idea of space differs so significantly from that of Kant, it is difficult to accept that he is using representation in a spatial context in the same way that Kant uses that term. Faced with two contradictory assumptions, all we can say is that Greenberg is ambiguous in his use of the term representation in this passage of Modernist Painting, a passage that has important implications for painters in their productions. This is because Greenberg's prescriptive conditions for painting rely upon spatial arguments and, if his understanding of space differs significantly from that of Kant, the authority he claims for those arguments is weakened, allowing painters more freedom in their productions.

However, Kant is also often ambiguous in the use of the word "representation". As Caygill (1995, p356) remarks,

> *Although representation is crucial to Kant's account of knowledge and experience, there is little explicit discussion of what is being represented by whom (or what) and in what way.*

The underlining is mine to emphasise the difficulty of deciding whether a representation causes its object or is caused by its object. This, in turn, refers to the question of whether the subject is active or passive in relation to its object. Despite this general difficulty of Kant's use of representation, I believe that in talking about the representations of space and time, there is no ambiguity in Kant's use of the term. He is quite clear that the formal principles of intuitions, space and time, are not adjectival characteristics of knowledge (Caygill, 1995, p264-265) but are a faculty of knowledge through which the mind directly apprehends the concrete singularity of things and does not subsume them as instances of abstract and general concepts. Yet he also claims that space and time are formal pure a priori principles. This presents a paradox because intuitions of space and time as formal principles that make possible and precede our experience of objects, which then affect our sensibility, is inconsistent with Kant's claim that intuitions (including the special intuitions of space and time) are given through the senses and are only possible through something affecting those senses. This is tantamount to claiming that intuitions are conditioned by, as well as conditions for, objects in our experience. The spatio-temporal nature of our relation to our objects of experience is a complex and problematic one not only for Greenberg, but for Kant too.

We are, I suggest, left with a situation in which we cannot reach a simple and singular conclusion about the relationship, in regard to spatial representations, between Kant and Greenberg. We have no option but to continue to reflect on the ambiguities that we discover in both and in the relation between them. Such ambiguities are not simply a disadvantage; they encourage us to continue to reflect on matters rather than to close the discussion around a point of certainty.

Even if this ambiguity about Greenberg's use of the term representation were to be resolved, I suggest that problems would remain in Greenberg's claim to Kantian authority, particularly in his claim to Kantian self-criticality. It is still a problem that Greenberg appears to believe that sensation from the object suffices for our experience of it, in contrast to Kant's claim that it is the subject who, in addition to what is given in sensation by the object, both enables and orders experience of the object. This particular difficulty effectively precludes Greenberg, in the absence of

any appeal to the transcendental subject, using Kant's epistemic reversal to sustain an appeal to Kantian self-criticality. However, the ambiguities that appear in both Greenberg's and Kant's use of the term representation in a spatial context are of interest, I claim, because they have the potential to provide a basis for re-establishing Greenberg, to a degree, within a (probably re-inscribed) Kantian system of thought.

In the next chapter I criticise Kant's reliance on the idea of autonomy in his systematic philosophy and methodology. That critique only reconciles Greenberg to Kantian thought insofar as they both suffer similar difficulties in their work through their use of the concept of autonomy. In later chapters, which refer to contemporary neuroscience for their authority, the notion of autonomy appears increasingly irrelevant within a paradigm that refers to the dynamics of perception in neurological terms.

CHAPTER THREE

KANT'S AESTHETICS AND HIS CRITICAL TRILOGY

In the previous chapter I examined Clement Greenberg's claim that his conditions for the autonomy and quality of modernist painting found their authority and legitimation in terms of Kant's self-critical philosophy and methodology. In that chapter I did not critically examine the authority of Kant to which Greenberg made his appeal; I took the work of Kant as the Gold Standard against which the work of Greenberg was to be judged. I had two reasons for doing that. Firstly, I felt that Greenberg was entitled to a critique of his work in terms of the authority that he actually claimed and not in other terms. Secondly, I was aware that, in a very real sense, Kant's work has been a Gold Standard, inasmuch that it has dominated aesthetic theory in modernism, for a very long time. As Caygill (1995, Introduction) writes, "*The influence of Kant's philosophy has been, and continues to be, so profound and widespread as to have become imperceptible".* This is not to suggest that aesthetics, as a discursive practice, has remained unchanged since Kant; it evidently has not. But it is to acknowledge that much of aesthetic discourse since Kant has been to interpret, oppose or re-inscribe his work. Because I used Kant as the standard for my critique of Clement Greenberg, I think that I should show good cause why I should not continue to accept Kantian authority in aesthetics for the rest of this thesis. That is an important part of the purpose of this chapter.

If I have demonstrated anything in Chapter Two, it is only that certain important particularities of Greenberg's arguments in Modernist Painting are incompatible with or even contradictory to Kantian philosophy and methodology. More generally, I have suggested in that chapter that the conflict between Greenbergian empiricism and Kantian idealism, (even though the latter's idealism is limited in a way that Greenberg's empiricist positioning is not), amounts almost to an incommensurability between the work of these authors. None of this implies that Greenberg is *wrong* or that Kant is *right* in their aesthetic judgements. Any such conclusion would be a disservice not only to Greenberg but also to Kant. To elevate Kant to the position of an unquestionable authority is to embalm his work in a mausoleum of certainty and it deserves a better fate than that.

In this chapter, therefore, I discuss some of the difficulties that arise within and between Kant's three Critiques. All three Critiques are relevant to any attempt to

apply a re-inscribed Kantian aesthetic to painting today because they together constitute a complex systematic philosophy and because of their degree of interdependence upon each other in terms of certain crucial relationships such as those between concept and intuition and between autonomy, freedom and morality.

Perhaps it is surprising to claim that a two hundred year old philosophical system is relevant to contemporary painting, yet I think that the claim can be sustained for the following reasons. Kant's First Critique establishes his self-critical philosophy and methodology together with his epistemology that describes how the world of appearances is possible for us in cognition of objects. Kant's self-criticality, developed in his First Critique, has been of major importance for the development of late modernist painting, as discussed in the previous chapter. Despite the reservations that I have expressed about Clement Greenberg's Kant exegesis, I recognise the value of his emphasis on the importance of self-criticality in painting in terms that are based in considerations of the dimensionality of pictorial space. The influence of Greenbergian modernism is still evident in much of painting today; and it needs to be, if for no other reason than that post-modernist practice needs to maintain a modernist moment within itself to occupy a meaningful place in the history of the discursive practice of painting. Additionally, there is the wider social consideration that our contemporary social, political and economic institutions remain largely modernist in their constitutions and operations. It has been the historic role of painting to both evidence and contest the values and institutions of the society in which it is produced. Contemporary painting ought, I believe, to continue to discharge such a role, and one way of doing so is to both evidence and contest late modernism's socio-economic repressions by alluding to them in the specificities of its own practice.

Kant's Second Critique moves on from the phenomenal considerations of its predecessor in order to address the world of objects conceived as noumena. For Kant, we humans are not just phenomenal objects of experience in the world. We are not simply the consequences of antecedent causes and ourselves the antecedent cause of some future phenomenal event; that is to say, we are not means to an end, we are ends in ourselves; both part of nature and apart from it. Kant's First Critique is primarily about necessity and his Second Critique is about freedom. He needs both critiques to describe our humanity. I strongly hold the view that, because art is made by humans for humans and is often about what it is to be human, art needs a moral (noumenal) moment as well as a phenomenal one. I

believe this because I believe that art is not just entertainment any more than humans are. That is not to claim that art has no entertainment value, but it is to claim that art has something in excess[16] of entertainment; art is more than the titillation of desire, though a painting, for example, that is an effective stimulus for desire may still be art. Kant's definition of beauty as the feeling of pleasure in us that we predicate on an external object is deceptively simple. If taken in isolation, such a claim could be construed as stating that anything, in nature or in art, is beautiful so long as we experience pleasure in beholding it. In the Analytic of Beauty in the Third Critique Kant constructs a complicated set of qualifications around the simple statement that beauty is a feeling of pleasure in us predicated on an object. I comment on these qualifications a little later in this chapter but for now I simply want to briefly explore Kant's possible motives for what may seem to be his unnecessarily complicated and difficult treatment of beauty in his Third Critique.

I accept that Kant's theory of beauty is partly motivated by purely disciplinary considerations to unite his critical trilogy and, in that sense, he positions beauty in an instrumental role to his wider philosophical interests. Yet there is another reason that I claim for Kant's insistence on the *disinterested* nature of beauty and the peculiar nature of the aesthetic judgement's lack of purpose (end) yet having purposiveness (finality). I believe that this reason is that he wants beauty and the aesthetic judgement to undermine the currency of simple individual self-interest. It is this reason, additional to purely a disciplinary requirement, which motivates Kant to analogously claim that beauty is a symbol of the moral. Kant was aware of the social problems that had arisen from the Enlightenment's rejection of an externally given moral authority, whether from God or his agencies in the form of the monarchy and the episcopacy. Something was needed in its place and Kant's philosophical project was intended to provide such an authority, internally based on the transcendental freedom of the subject, through practical reason. Kant faced the problem of reconciling the demands of this rational freedom with the necessities of nature. Successive generations of philosophers have objected to what they have considered to be the authoritarian aspects of Kant's rational conception of freedom and many have argued that the Kantian project ultimately failed to resolve these issues.

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[16] I return to this point in later chapters where I discuss the role of excess as exaggeration in the context of the neuroscientific explanation of how it is we take pleasure in art objects that have no purpose that relates to our biological survival mechanisms yet, in stimulating pleasure in us, operate as if they did. That, in turn, relates to the Kantian claim that beauty is purposive without purpose.

The problem of reconciling freedom and necessity has not vanished with modernism, even accepting (which I do not) that modernism itself has vanished. In the contemporary world we still face the problems of reconciling our personal freedom as individuals with our need for a meaningful society and the restraints that such a structure imposes. Kant's great philosophical project may have been judged to be deeply aporetic and problematic but in examining these aspects of his work we find insights into the difficulties of our own projects, both social and artistic.

In Chapter Two of this thesis I expressed my reservations about Greenberg's claim that painting finds its autonomous domain solely in terms of its relation to its material substrate. Though I make specific criticisms of Kant's work in this chapter, I want to keep the connection he makes between beauty and morality because of my discontent with a different claim: that art finds its autonomous domain merely in entertainment.

In later chapters I look for a narrative of beauty that is more positively constructed than Kant's and which will, I hope, retain and strengthen Kant's linkage of beauty to the moral as well as maintaining beauty's connection with objects of cognition.

<u>Kant's philosophical positioning in relation to his theory of beauty</u>

In his Introduction to the Third Critique (section III), Kant describes the function of the Critique of Judgement as being *a means of connecting the two parts of philosophy in a whole.* He goes on to state that,

> *For all the faculties of the soul, or capacities, are reducible to three: the faculty of knowledge, the feeling of pleasure or displeasure, and the faculty of desire.....Now between the faculties of knowledge and desire stands the feeling of pleasure, just as judgement is intermediate between understanding and reason.*

Thus the aesthetic judgement and the nature of beauty are to form a bridge between understanding and reason and between knowledge and desire respectively; that is to say, they are to form a unifying bridge between the subject matter and methodology of his First and Second Critiques. I want to stress here the huge interest Kant has in attempting the Third Critique as the crowning unifying synthesis of his critical project; so much is at stake and one can admire his ambition and courage. In doing so, however, I think it is also very useful to keep in mind the disciplinary interests that both constrain and strongly influence the results of his enquiry; his insistence on the

disinterested nature of beauty, for example, is far from disinterested. Kant's positioning is, I believe, ultimately responsible for what many have considered to be an overly formal and predominantly negatively constituted theory of beauty that is capable of accommodating a very wide range of interpretations. The Third Critique folds back upon, and is itself enfolded by, its own textual antecedents. That is not unusual in itself, but because the Kantian critical project is so wide-ranging in its scope and so resolutely systematic in its methodology, I suggest that the degree to which Kant's earlier work influences his Critique of Judgement is somewhat exceptional and is a disadvantage as well as a strength.

Before discussing the consequences that result from Kant's disciplinary positioning, I shall very briefly outline the contents of Kant's Analytic of the Beautiful and his development of the aesthetic judgement of taste.[17] My synopsis is based upon the succinct and elegant account of these matters given in Burnham (1999), and the translation of Kant's The Critique of Judgement by Meredith (1952).

The aesthetic judgement and beauty are intimately connected for Kant. By the term aesthetic judgement Kant means any judgement of the type that can be expressed in the following sentence. "When I look at or listen to that object or event, I am pleased by the mere experience of it, and say that it is beautiful or sublime."[18] The Kantian aesthetic judgement differs from previous pre-critical philosophical usage of the term aesthetic that judge art in terms of the perfection and clarity in helping us know something about an object. Because the Kantian aesthetic judgement is reflective and not determinate[19] and therefore not conceptual, it does not contribute to knowledge.

The term judgement of taste, in Kantian terms, means that something pleases us or is liked and is therefore judged beautiful. Taste is simply our ability to judge natural or art objects as beautiful. The meaning of pleasure for Kant is equally

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[17] I shall return to these matters in much more detail at the end of this thesis where I examine them in the light of Chapters Four and Five that develop a biologically based theory of beauty using ideas drawn from contemporary neuroscience.

[18] In this thesis I confine myself to discussions of the beautiful and exclude considerations of the sublime.

[19] The distinction between these judgments has been discussed in the previous chapter. In the context of this chapter the importance of the aesthetic judgement is that it does work of "its own accord, within itself" rather than relying on some externally determinate concept. Kant attempts to demonstrate that reflective judgements rely upon - but are significantly different from – a priori grounds in the subject that are closely related to the grounds for both theoretical and practical reason.

straightforward (Burnham, 1999, p43); it simply means "*the feeling of an enhancement of life*". Kant does not give what might be called a traditional deduction to legitimate the existence of aesthetic judgements but argues we are justified in assuming a transcendental necessity for them and points to what appear to be people's aesthetic responses as phenomena that require explanation. The aesthetic judgement is what furnishes such explanation.

So far, the relation between beauty, pleasure and the aesthetic judgement is simple. Complications arise through Kant's concern that the aesthetic judgement is properly used; that is to say, that subjective, intellectual or moral interests or objective properties of the object that is judged beautiful are not mistaken for a response to the mere experience of the thing in itself as beautiful. Kant provides us with four Moments[20] in the Analytic of the Beautiful the purpose of which are to ensure that the judgement of taste is properly applied. These moments are listed below.

<u>First Moment</u>

In the first moment Kant stresses that,

> *The delight which determines the judgement of taste is independent of all interest.* (prop. 2)

By the term interest Kant means that the subject desires the object in some way. Specifically, Kant excludes the "agreeable" from the judgement of taste – by agreeable he means "*that which the senses find pleasing in sensation*". In this context Kant uses the word sensation to refer to the subjective "sensation" of, for example, eating honey (Burnham 1999, p52). One reason for Kant's objection to such a pleasure being considered as aesthetic is that not everyone likes honey; the judgement is not a universal one.[21] But Kant has another argument quite apart from universality and that is that a desire for honey as a pleasure that arises from sensation, presupposes that both honey and I actually exist and can only be achieved by my action in relation to an object (honey) that is outside of me. Even if I only imagine the pleasure of eating honey, I can only imagine it in terms of me possessing and eating the honey. The pleasure is only conceivable in terms of the gratification of my desire and not in terms of the "mere appearance" of the thing in itself.

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[20] These moments correspond with Kant's four categories of quality, quantity, relation and modality, in that order.

[21] Kant is anticipating the second moment's requirement for the universality of aesthetic judgment here.

Very similar considerations apply to Kant's exclusion of "the good" from aesthetic judgements. The thought of a moral deed is only pleasing if imagined as a possible object of the will. To will something and take a delight in its existence, as we ought to do with the good, is to desire it and is an *interest* in it.

Delight in the good is coupled with interest. (prop. 4)

To consider something good is to have a concept of what the thing is for and concept is not needed to see beauty in a thing.

The first moment of Kant's Analytic has important implications for art and its practice because Kant does not want us, in estimating beauty, to have regard to sensations (content) that lie within form, but only to form itself. By form, Kant means simply the spatio-temporal structure of an object. Though Kant acknowledges that pure colour, for example, can be beautiful, he sees its role as secondary to that of form, and cautions that it may obscure form. As Burnham (p52, 1999) remarks,

Kant is the ancestor of formalist theories of art.

<u>Second Moment</u>

This moment addresses Kant's claim for the universality of aesthetic judgements. Returning to the example of honey once more, the statement "I like honey" appears to be an aesthetic judgement; it is equivalent to claiming a feeling of pleasure in relation to eating honey. But for Kant, feeling is a private[22] matter. Also, if I say that I like honey, I do not expect that everyone must agree with me and like honey too. But if I say, "Honey is sweet" I do expect everyone to agree with me because I regard it as an objective fact that honey contains sugar. Judgements that are aesthetic are somewhat like the statements "Honey is sweet" or "Honey contains sugar" because the statement that an object is beautiful is more like an objective statement of fact than the private report on sensation that describes a feeling of pleasure in me when I see something beautiful. However, Kant does not claim that beauty actually *is* a property of objects but only that we talk about beauty *as if* [23] it were an objective property. Strictly speaking the second moment talks not of universality but of universality without a concept. This qualification ensures that the aesthetic

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[22] Interestingly, Kant's claim that feelings are essentially private is the same as the view taken by contemporary neuroscience, discussed in the next chapter, which claims that feelings take place in solipsistic isolation.

[23] This qualification, that we behave <u>as if</u> beauty was actually a property of objects, is characteristic of Kantian methodology; we have seen it in operation in the previous chapter in the context of Kant's epistemic "Copernican revolution".

judgement is always singular and cannot be extended, via concept, to include an entire class of objects of a certain type.

Kant claims that the aesthetic judgement,

...demands the agreement of others. (prop.7)

This is a strong statement, not merely the expectation or solicitation of other people's agreement. Kant recognises that, *in fact,* all people do not agree in their aesthetic judgements, but attributes this to mistaken individual judgements. This point of view arises because the aesthetic judgement, so Kant claims, operates in such a way as to assert the existence of a correct estimation of beauty, just *as if* it were objective. The claim of universality is very dependent on the *as if* claim for objectivity that also sustains the claim for communicability of aesthetic judgements even though feelings are private.

<u>Third Moment</u>

This moment is about the form of purposiveness (finality) as distinct from purpose (the end to which actions are directed). The latter is an object the cause of which is a concept of it; for example a cup of tea results from my concept and my actions to realise the concept of a cup of tea. Switching on the kettle is purposive in that it is not the end purpose but part of a chain of events coordinated by my purpose. Kant claims that the aesthetic judgement is apart from concept and as such it cannot include the concept of the object's purpose. He also claims that, despite its lack of a determinate purpose, the judgement of the object is purposive; it appears as if it had a purpose or as if it belonged to the chain of events involved in realising a purpose. Burnham (p64, 1999) gives the example of walking through a jungle and finding an old typewriter. I recognise the object as a man-made machine that has been constructed for the purpose of typing on paper; I know its determinate objective purpose and that the object is final and has purposiveness. I walk on and find an elaborately carved wooden stick that I do not recognise. I realise that the stick is not a natural object and a part of its surroundings – just as I did with the typewriter – but this time, I do not know its purpose, what it has been made for. I understand the internal purpose of the stick, because I know how to carve one just like it,[24] but I do not know why the object has been produced; I do not know its external purpose. I

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[24] The internal purpose of an object is about the actions taken to bring the object into being so as to achieve the concept of its perfection; it is about how the object is achieved. The external purpose of an object is the "why" of the object; it is about the purpose the object is to serve.

know the object to be purposive because it appears to have been made *as if* for a purpose, yet I know not what that purpose is. I attribute this lack of knowledge to my ignorance because I believe that an external purpose is capable of being found for the stick.

For Kant the lack of external purpose for the beautiful qua beautiful[25] is <u>essential</u> rather than accidental or optional. This is especially relevant to art objects. People, especially artists, know about the internal purposes of the art object but Kant claims in the second moment that the internal purpose is not sufficient for the artwork to be judged beautiful. Additionally, in the third moment, Kant claims that fine art qua beautiful does not have external purposes either; art, in so far as it is art for Kant, is not made for any objective purpose; the beautiful ought to be pure[26] of any dependent concepts.

It is important to note that in discussing the connection between purposiveness and pleasure Kant insists that the aesthetic judgement consists[27] of feeling. It is the attainment of feeling that does all the work in the aesthetic judgement and nothing is added to that work by the predication of feeling onto an object.

<u>Fourth Moment</u>

In this moment Kant examines the grounds for the aesthetic judgement rather than the details of the operation of the judgement itself. He claims that an inter-subjective "common sense" may be presupposed as this common ground for all four moments of the beautiful. His use of the term "common sense" (*Gemeinsinn)* is not what we mean in every day usage; it is not the sort of pragmatic, intelligent decisions that we attribute to people we call sensible, meaning that they possess wisdom, balance etc. in reaching decisions. Neither does it imply that such decisions are commonly held because they are self-evident. Judgements of these types all rely on understanding based on concepts and cannot apply to the beautiful that is a feeling of pleasure apart from all concepts.

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[25] The beautiful object considered merely as beautiful, without any regard to possible external purpose.

[26] Pure and impure judgments of taste, free and dependent beauties, together with the idea and ideal of beauty are not dealt with here, because I discuss them later in this chapter.

[27] That is to say, the feeling is not a constitutive part of the judgment; it <u>is</u> the aesthetic judgment.

By common sense, Kant means something rather like the sense organs: for example, that which we have in common, the sense of sight in general, rather than an individual's specific ability and quality of seeing. A sense is a particular mode of becoming aware of something and by common sense Kant means our mode of becoming aware of the beautiful by means of the feeling in certain states of mind that we call aesthetic pleasure.

Kant goes on to claim necessity for this meaning of common sense and the aesthetic judgement. In Kantian terms, necessity implies an a priori principle that is subjective and not derived from experience. The claim to necessity is not about the judgement itself but about the conditions for its possibility. In the previous chapter I discussed in detail the Kantian conditions for the possibility of objects in experience: the conditions for cognition that turn out to be, for Kant, the pure a priori intuitions of space and time. The formal similarity between the conditions for the aesthetic judgement that Kant is developing here and the conditions for cognition that he established in the Transcendental Aesthetic of the First Critique is clear.[28]

Along with the claim to necessity goes the connotation of universality. Necessity is (p56, Burnham, 1999) a "modal" concept; it is about the manner or form in which we make judgements and not about the particular content of a judgement. Burnham gives the example that two apples and two apples add up to four apples, and this is true independently of what kind of things are being added, provided there is concept available under which all four things can be subsumed – and it doesn't matter what this concept is. Necessity is that which can be proved from first principles (in this example from mathematical principles) to be the case. If something can be proved to be the case it has a claim on universality of agreement because, in an important sense, that is what proving something means. If we are all to agree on something then that something must be communicable. Most necessary judgements involve concepts but the aesthetic judgement, by definition, cannot. That is a problem for Kant and he deals with it in his usual way: by claiming that it behaves *as if* it were following a universal rule that we are unable to state. He also claims that the aesthetic judgement is always singular and "exemplary".

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[28] This similarity, though useful at this point of his argument, leads to very significant problems in distinguishing beautiful objects from objects in general, and in sustaining the autonomy of reflective from determinate judgements. I discuss the proximity of the aesthetic judgement to that of cognition later in this chapter.

These qualifications imply the following functions of the aesthetic judgement:

1 Its universality is as if it were a description of an actual object.

2 Its necessity is as if it were conditioned by an a priori principle.

3 Its exemplary and singular nature prevents us from extending a particular judgement to other objects.

The judgement of taste is necessary only in the conditional sense that it is a subjective a priori principle of the faculty of taste. And it is just this faculty that Kant calls common sense: the universal rule that we were unable to state above. To put this in another way, we can say that everything that happens in a judgement of taste does so in exactly the same way *as if* there was a determining principle that functioned in the reflective judgement, as does a concept of understanding in a determinate judgement. The problem remains that after this ingenious, though somewhat complex, argument we are still unable to say what this principle is. What does emerge from all this, however, is that just as the products of understanding are not the same for everyone so neither are their aesthetic judgements; what is universal about aesthetic judgements is our capacity to make them. As Kant writes in the fourth moment, aesthetic judgement will be,

> *valid for everyone who is so constituted to judge by the understanding and the senses in combination (in other words, for all human beings).* (prop. 9)

We can certainly communicate our determinate judgements of understanding but it not so evident that we can communicate our feelings as effectively. Moreover, Kant has already assigned to feeling a private character, as we saw in at the beginning of the discussion of the second moment. The question remains as to how the private aspect of feelings can be reconciled to their communicability. Kant does not mean, by the term communicability of feeling, (in the aesthetic judgement), that we all have knowledge of how others feel and think because we all think and feel the same way, but that others *could* think and feel, in principle, as we do; we share a common field of possibility of feelings just as we share a common field for the possibility of objects in cognition. This universal commonality of the possibility for experiencing feelings and objects could arise either because of sharing a real world with its real properties and laws that are the same for us all, or because we all have the same faculties which transcendentally constitute the world of objects and the world of our internal feelings for us in experience.

In Chapter Two and its appendices I discussed how Kant claimed that we may, in every day affairs, assume that we cognise a real world of real objects, provided that

we bear in mind the contingency of such an assumption on the transcendental ground that supports it. In other words, the determinate and communicable objectivity of the world arises, for us, because of our universal transcendental theoretical cognition that provides its ground. But there is no determinate and communicable objectivity in the Kantian aesthetic judgement or the feelings of pleasure that Kant links to it. It is difficult to see how the aesthetic judgement and beauty relate to cognition in a way that guarantees their transcendental constitution – and hence universality and communicability – without any objectivity. The (Kantian) conditions for cognition are, after all, the conditions for objectivity. Kant rejects any appeal to psychological explanations of the universality of the aesthetic judgement that is not, for him, a matter of common behaviour of people but is built into, an intrinsic property of, the aesthetic judgement itself.

From an individually subjective, i.e. private, point of view Kant's idea of common sense explains the ability to feel pleasure in the beautiful. Kant claims that this ability could only lay claim to necessity if it contained within itself a (hidden) a priori principle. The public and inter-subjective aspect of common sense, universal communicability, is ultimately grounded in the transcendental subject that is common to every person's faculties and is provided by cognition. Kant attempts to reconcile these private and public demands on the aesthetic judgement of beauty by claiming that the judgement brings the cognitive faculties into "agreement" or "harmony" in general. At the same time, he insists that this "agreement is reached without the aesthetic judgement agreeing to any principles or concepts of reason or to any particular spatio-temporal presentation of sensibility – any particular thing. Kant attempts to show that the private feelings, based on "harmony" and public universal communicability, based on exemplary necessity are all aspects of the same thing: commonsense. Kant suggests that common sense is, in turn based on the faculties of cognition that are the ground in us for any experience at all, aesthetic or otherwise.

The fourth moment claims that a beautiful presentation is purposive for cognition in general, that is to say it satisfies cognition, not in respect to any particular concept of purpose, but in respect of the general function of objective thought. Kant claims that it "quickens" or "enlivens" our cognitive faculties and we take pleasure in that quickening. As Kant writes,

> *We linger in our contemplation of the beautiful, because this contemplation reinforces and reproduces itself.* (prop. 12)

I agree with this statement about the power of beauty to stimulate and prolong the general function of objective thought; beautiful objects are interesting and we experience pleasure in thinking about them. The problem is to demonstrate that the judgement of taste (based on Kantian common sense that is subjective and a priori) is, a priori, connected to the representation of an object. This demonstration or proof cannot be achieved for several reasons.

Firstly, if the connection could be demonstrated, beauty would be conceptually mediated, via the representation of the object, by the conceptual nature of cognition. Secondly, the connection between the presentation and the feeling of pleasure would be a causal one. If the demonstration were a priori then the cause and effect relation would have to be a priori too but such causal a priori determinations are too general as rules of understanding and are empty of specific content. If, on the other hand the presentation was singular and specific – as it must be if it is to be judged beautiful – then it could only be given empirically or a posteriori. Thirdly, though Kant sets up a chain of causal relations: presentation of the beautiful object "causes" a feeling of pleasure in the subject; this then "causes" the subject to linger in contemplation of the beautiful object and the cognitive faculties are thus "caused" to be quickened and the whole process of feeling pleasure is described as "life enhancing", these separate distinguishable elements are all part of the same metaphor (Burnham 1999, p72) to the extent that any of them are metaphors for each other. Put simply, the aspects of the experience of the beautiful, pleasure, lingering contemplation, quickening and the enhancement of life are not separate entities but are equivalent descriptions (metaphors) of the same mental state. This is not a strictly causal argument because cause and effect, within the argument, turn out to be the same thing.

Kant recognises that the connection between the presentation of a beautiful object and the aesthetic feeling of pleasure cannot be demonstrated a priori and this implies, in terms of theoretical reason (i.e. from a cognitive point of view) that the aesthetic judgement is not necessary but merely contingent. That is to say the link between cognition and the aesthetic judgement is an assumption. It could be otherwise. The link might be of a different nature or there might not be a link at all. Yet from the standpoint of reflective judgement itself, the necessity of a link between the feeling of pleasure and the presentation of a beautiful object to our cognitive faculties in general is given as an a priori principle. There is a significant difficulty in reconciling these two points of view. Kant's claim, in the third moment of the Analytic, that the beautiful object of the aesthetic judgement is seen as being

(subjectively) purposive without any definite purpose is designed to help this reconciliation because it attempts to explain how the beautiful might conform to the cognitive faculties in general without being subsumed under a particular (objective) concept of cognition such as purpose.

After a lengthy discussion of the sublime, Kant returns to the subject matter of the beautiful and the aesthetic judgement and gives his Deduction of Aesthetic Judgement. The purpose of this deduction is to return in more detail to the problems of commonsense and harmony sketched out above. As we have already seen, Kant's claim for the aesthetic judgement is that it brings our cognitive faculties into a state of agreement and harmony that gives us pleasure. Kant also claims that commonsense as the universal communicability of the aesthetic judgement is also based on our cognitive faculties that are the ground in us for any experience at all. In his Deduction, Kant attempts a demonstration of these claims.

My purpose in this chapter is primarily to discuss Kant's claims about the nature of the beautiful and the aesthetic judgement of taste rather than the way he sets out to philosophically prove those claims. Many of the difficulties of his ideas about beauty and the aesthetic judgement have already emerged in the above discussion of the Analytic of the Beautiful and of the Aesthetic Judgement and I do not believe that his Deduction substantially relieves or exacerbates those problems. Additionally a full discussion of his Deduction would be very lengthy. For these reasons, I shall only give a very brief discussion of its implications for the contents of his Analytic.

The idea of a universal common sense is crucial to sustain Kant's claims for the aesthetic judgement because it is the subjective a priori condition for the judgement. In section 21 of the Critique of Judgement Kant starts by justifying the communicability of cognition (either entirely theoretical or empirical) on the grounds that it is virtually equivalent to objectivity. He then proceeds to the mental state of such cognitions – the subjective aspect of cognition – namely the proportion between understanding and imagination involved in the cognitive judgement, and claims that these proportions must be as universally shared as are the objective presentations considered in the first step of the argument.

The third stage is about not only how this proportion or ratio between understanding and imagination will vary according to the object being judged, but is also about how it will vary with the specificities of a particular judging subject's abilities. That is

equivalent to saying that not everyone, in judging the same object, will use the same proportion of understanding and cognition in the cognition of a particular object. The problem lies with this last statement because it is a psychological claim and is clearly not an a priori transcendental – and hence universal/communicable – claim.

Despite this variability and lack of universality amongst individual subjective cognitive judgements, Kant proceeds to the fourth stage of the argument, which is that there is one unique proportion/ratio between understanding and imagination that "quickens" and "harmonises" the cognitive faculties. Not surprisingly this unique proportion is none other than the proportion necessary for a presentation in cognition to be beautiful. This hardly amounts to a deduction of the unique proportion as a priori necessary but is, I claim, more like an assumption or assertion for its necessity.

The fifth step of the argument is that this unique proportion or ratio between understanding and imagination is experienced through feeling rather than concept. The claim is that it cannot be apprehended through any concept because it is something relational between concepts. I find this argument difficult to accept because the idea of ratio or proportion is clearly a (mathematical) concept and a determinate one at that. If, therefore, the aesthetic judgement arises from this optimum ratio between two faculties of cognition then the implication is surely that the aesthetic judgement is conceptually based. I agree that we cannot know what this ratio is; yet that does not detract from the clear implication that such a ratio exists. Kant goes on to claim that although feeling is usually entirely subjective and not universal (hence private) in the case of the feeling that arises from this optimal ratio, in the case of beauty, it is universal because it is communicable (hence public). Kant claims that common sense is the principle that this feeling in the aesthetic judgement is universally necessary. I am not convinced by the circularity of this argument though I recognise that the situation described by it may be so. I claim that Kant has provided an assertion rather than a demonstration for the universal necessity for common sense.

The sixth and final stage is Kant's claim that common sense is necessary for ordinary cognition of all objects and hence for knowledge in general, a claim established in his First Critique as the ground for the universal communicability for the possibility and knowledge of objects. Kant claims that this same common sense is also the basis of aesthetic judgements and hence legitimates the claim for universal communicability of such judgements. Kant does not justify his claim that aesthetic judgement

depends, for its universality, on the common sense that he has demonstrated for the cognitive judgement. The possibility remains, therefore, that matters might be the other way round: that cognition depends on feelings of pleasure and displeasure for its universality, or that both the cognitive and the aesthetic judgements depend on some other more fundamental ground for their universality. Affective neuroscience tends to support these latter views.

For that reason it is appropriate, at this point, to briefly look ahead to the subject matter of the next two chapters. Affective neuroscience claims that what we all have in common is our ability to emote, and that emotions lead to feelings of pleasure and displeasure that are indispensable to all intentional actions, including mental actions such as cognition and reason. Affective neuroscience thus supports the Kantian claim that aesthetic judgement is universal, but regards feelings of pleasure and displeasure, rather than cognition, as the common ground for the universality of all judgements. These feelings, built upon emotion, are, in terms of affective neuroscience, the common ground, the motivation and the reward for all action including the mental actions that Kant calls judgements.

Kant's chain of argument, outlined above, ultimately relies on the idea that aesthetic judgement is based on harmony and proportion/ratio between the cognitive faculties. But why should it? Why should it have anything to do with the faculties of cognition at all? It is conceivable that there exists an entirely different sort of aesthetic common sense from the common sense that provides the universal communicability of objective knowledge in cognition. I claim that it is also conceivable that, if the aesthetic judgement does have something to do with cognition, then cognition is parasitic upon the aesthetic judgement (in the sense that it borrows its universality, communicability and necessity from our subjective feelings) rather than, as Kant asserts, the other way round.[29] That is equivalent to assigning to feeling a kind of primacy over reason and very much goes against the grain of Kantian thinking, which ultimately always privileges reason, particularly practical reason, over feeling.

Kant's response to the question of why our aesthetic judgement is related to cognitive judgement is in terms of purposiveness. It is reasonable, he claims, to hold that purposiveness *without purpose*, as in the aesthetic judgement, is related to *purposiveness with purpose* in the cognitive judgement. Purposiveness itself is

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[29] I discuss that idea in later chapters in terms of the biological neuroscientific narrative of emotions, feelings and intentional action.

assumed to be much the same for both. Purposiveness in the cognitive sense is clearly to do with purpose in the same sense, which is the concept of the cause of an object. Therefore, Kant claims, the indeterminate purposiveness of the aesthetic judgement must be significantly different from the determinate purposiveness of the cognitive judgement, otherwise the aesthetic judgement would not be reflective and beauty would not be apart from concept. By this move, Kant justifies his claim that a significant difference exists between the two sorts of purposiveness and is to be found in the ratio of the faculties of cognition involved in the aesthetic judgement that is absent in the ordinary cognitive judgement. This allows him to distinguish the aesthetic judgement from the cognitive judgement yet maintain a link between them and at the same time supports his claim for a optimum proportion or ratio as the distinguishing feature of the aesthetic judgement.

Such a claim is hard to reconcile with his claim that the reflective aesthetic judgement is autonomous from the determinate judgements of cognition. However, that is not my main point here. My claim is that Kant's contention that there is a significant difference between the cognitive purposiveness and aesthetic purposiveness (and hence the two corresponding judgements) is a two-edged sword. Certainly this difference *could* be explained by Kant's ideal ratio/proportion idea of the faculties of cognition in aesthetic judgements, but that is not, I claim, a necessary conclusion but a contingent one; it is contingent because one could just as well explain the difference in purposiveness involved in the two sorts of judgement by claiming that both the judgements (like their qualities of purposiveness) are completely different.

I am not, at this stage, claiming that this is so, but simply that one has to recognise that it is a (contingent) possibility and that Kant's conclusion is also a contingent and not a necessary one. Kant implies another claim in this argument, which is that purposiveness without purpose is also a feature of cognition. That would provide a link between cognition and aesthetic judgement and ensure the failure of my argument that the two *might* be completely different. But why should we believe that cognition also contains this particular fixed or even variable[30] proportion/ ratio? In the absence of any demonstration for this that does independent work from the claims Kant has already made, we have to accept the contingency and not the

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[30] Kant is ambivalent, even self-contradictory as whether this harmonious proportion/ ideal ratio is a fixed or a variable one claiming both in different passages. If this ratio is fixed or varies in the same way for both cognitive as for aesthetic judgements, how are we to distinguish between the two judgements?

necessity of the relation of the aesthetic to the cognitive judgement and this returns us to the previous situation in which my objection can stand. I accept that the aesthetic judgement is related to the Kantian judgement of sensibility[31] because to experience objects as beautiful, indeed to have any feelings at all about them, they must be possible for us. I am also prepared to accept that the aesthetic judgement *may* be connected to the cognitive one but with the proviso that other explananatory narratives are also possible and the connection has not been a priori demonstrated and therefore is not a necessary conclusion. I return to this argument later in this and other chapters.

In summary of the discussion so far, we have seen that Kant claims that within the aesthetic judgement, beauty in art or nature is referred to purposiveness without purpose.[32] In artistic production, Kant claims that there is a purpose involved only in so far as the artist has intent to achieve finitude through the completion of the artwork. Although the artist may intend the work to be beautiful, that does not, for Kant, guarantee that it is so. Kant regards the art- work as self-contained in as much as the artist's intent to make it, or to make it beautiful, is insufficient to both detract from its purposiveness without purpose and to guarantee that all will agree that it is beautiful.

Purposiveness is the Kantian explanation of the feeling of pleasure in the aesthetic judgement. Kant claims that the fulfilment of purpose is pleasurable for us, and that in the absence of purpose, purposiveness will suffice in its place to elicit feelings of pleasure in the aesthetic judgement – and not just for the aesthetic judgement - but also for cognition in general. Because purposiveness will serve *as if* it were purpose, purposiveness is pleasurable. Kant does not adequately demonstrate the universality of that feeling of pleasure as arising from purposiveness, which is equivalent to saying that the a priori necessity of a grounding principle for the aesthetic judgement is not established. Specifically, what is lacking is the *demonstration* that the aesthetic judgement relies upon *the same* a priori conditions as ordinary cognition of objects. If we *assume* that the a priori conditions are the same for aesthetic judgement as for ordinary cognitive judgements then the former must have the same universal communicability as the latter. We may also *assume,* should we wish, the notion of an optimal harmonious proportion or ratio between the

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[31] Discussed in detail in the previous chapter.

[32] Alternatively expressed as finitude without end.

cognitive faculties of the understanding and the imagination (provided we have no other evidence to the contrary) for the most perfect activity of both these cognitive faculties in the aesthetic and the cognitive judgements. I claim, however, that both Kant's claim for the universal communicability of the aesthetic judgement and for an optimal ratio between understanding and imagination, which is the same for both aesthetic and cognitive judgements, is an assertion rather than a claim demonstrated a priori by his arguments.

The choice of positioning that Kant has made results, as Bernstein (1992, p193) remarks in the context of a commentary on Adorno's aesthetics, in the problem that,

> *Transcendental legitimation for aesthetic judgements could only be had if they were subsumed under either understanding or reason; but the proximating subsumption could only succeed at the cost of undermining aesthetic judgement's difference from understanding and practical reason. And, again, it is quite integral to the strictly Kantian problematic of aesthetic judgement, whereby it is to form a bridge across the abyss separating understanding from practical reason, mind from nature, is from ought.*

Bernstein goes on to review the many different attempts that later critics have made to re-interpret and develop Kantian aesthetics over the last two hundred years. At the heart of much of that work is the unresolved Kantian problem of the autonomy and heteronomy of aesthetic reflection in relation to our faculties of cognition and desire, or as others have expressed it, the conflict between necessity and freedom. Not all of this work is pertinent to my thesis and in the following sections I confine myself to those aspects of it relevant to my own position.

<u>My position in relation to the Kantian reflective aesthetic judgement</u>

There are significant differences between my own positioning in relation to the questions about the nature of beauty and of judgement and Kant's position on these matters. As an artist I am primarily interested in how I and other people respond emotionally to paintings and to art in general; I am looking for narratives that consider those experiences in visual art that I describe as affective. I am also interested in how societies of people react at an emotional level to art. This wider concern introduces the requirement that my investigation be conducted within a conceptual context that refers at least to general, if not universal, concepts and also to the relational aspects of constructing meaning within a social and cultural framework.

Because I am not a philosopher I do not have an interest in, as distinct from simply being interested in, the grand unifying synthesis of Kant's entire critical project. I am concerned with how our individual affective response to a particular artwork occurs and how we are able to communicate and modify that response through our social relations with others; in how we arrive at a cooperative and communal construction of what we mean by the term beautiful. For me, social consensus is an important aspect of our estimation of the beautiful because it enlists the power of beauty in support of a social system based on universal interests rather than simply self-interest. Kant had, I suggest, similar concerns; as we have seen from his Analytic of the Beautiful, he was at pains to establish the universal communicability of beauty in order to link it to the transcendentally free (Kantianly autonomous) subject provided by his moral philosophy. Such a move not only prevents beauty being reduced to the means of the private gratification of desire but, and more positively, it aligns beauty with the formation of a social consensus for the common good. Beauty thus supports a social structure that recognises and fosters the universal good rather than individual greed and the subjugation of others. For Kant, I believe, beauty is not just instrumental to the disciplinary concerns of his critical philosophy, but has much wider social implications. In this thesis I share Kant's motivation for seeking to establish the universal communicability of beauty but I shall use different arguments to support it in later chapters. At this point, I simply want to indicate that though I share Kant's social motivation in linking beauty to morality, my arguments will not be determined by considerations of the difficulties that they imply for the unity of Kant's critical trilogy as a whole.

In the above discussion I am not claiming a neutral position for myself because what I share with Kant (as well as with everyone else) are my own historical investments. I spent the early part of my working life as an academic physicist concerned with the astronomical world of appearances in relation to the spatio-temporal aspects of atomic physics. The middle part was spent farming so I may claim some experience of the conflict between necessity and freedom in relation to nature on both counts: at the theoretical and practical levels. Perhaps it is not surprising that I like Kant so much. Three members of my immediate family are professional psychologists, two of them specialists in neuroscience and the other in the social construction of meaning. I have had, therefore, to become interested in such matters, if only to be able to participate in conversations at dinner.

I mention these details only because they both situate and constrain my work. My own positioning, then, explains my desire to keep much of Kantian methodology and also to relate our response of pleasure/displeasure to an empirical world that is both internal and external in relation to our bodies. Such a world is internal to us in terms of the empiricist approach of neuroscience to our minds/brains on the one hand and is also explicable in terms of a relational approach (to external objects) of our (non-discrete) self on the other. These two approaches both subsume much of the distinction between rationalism and empiricism, and the desire to avoid collapse into one or the other that is so characteristic of Kant's systematic philosophy, which sought to critique (establish the limits of) the then orthodoxies of empiricism and idealism. I hope, by employing such means, to move the discussion of beauty away from the purely formal and classically modernist conceptions of the late 18th Century that rely on logical connections from discrete autonomous categories, and towards a more contemporary discourse that is based on recursive relationships that furnish several possible narratives of explanation.[33] Much of that discussion must wait until later chapters. For now, I want to discuss the relation of Kantian beauty to Kantian pure and practical reason.

The Kantian Aesthetic Judgement in relation to Pure Reason

The Critique of Judgement, the last of Kant's three Critiques, is of immediate interest to artists because a significant part of its subject matter is the philosophy of art, the usual understanding of the term aesthetics after the work of Kant. In the first part of his Third Critique Kant develops the aesthetic judgement in general and the judgement of taste in particular and it is in the latter of these two judgements that he lays out before us his theory of beauty.

To decide on the meaning of the term aesthetic for Kant is not a straightforward task because the target of such an enquiry is a moving one. Aesthetic carries a somewhat different meaning in the first and second editions of the First Critique and

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[33] Kant lived and worked in a largely stable and culturally homogenous society. He could, therefore, reasonably entertain the hope of providing a singular narrative of beauty in relation to that static social order. In our plural, culturally diverse and rapidly changing society we need narratives that, in their construction, evidence just these qualities if they are to have any relevance to the way we live now; one truth no longer fits all. For this reason, I want to construct a narrative of beauty that is more clearly legitimated by and in turn legitimates our contemporary plural culture and not simply the still economically and politically dominant sub-culture (that is also a super culture) of modernism. To do that, ideas such as wholly autonomous entities or categories, the discrete essential self, and linear causality may have to be replaced by the more open concepts of limited autonomy that includes an heteronomous moment, the socially constructed self in relation to others, and the reflexive circular causality of self-organising systems based on system and chaos theory rather than linear logical entailments.

by the time that Kant wrote the Third Critique, nine years after the first edition of the Critique of Pure Reason, the term aesthetic had a very different meaning compared to that employed in its earlier usage by Kant. I draw attention to this progressive shift in meaning because the meaning of aesthetic in the Critique of Judgement always carries within itself the trace of the meaning ascribed to it in the First Critique and this creates difficulties of which Kant was fully aware. He was not able to resolve them entirely, either, I believe, to his own satisfaction or certainly to the satisfaction of those who later commented on his work.

In the first edition of the CPR Kant writes that,

> *The science of all principles of sensibility a priori, I call Transcendental Aesthetic.* (A21/B35)

Kant makes it clear in the Preface to his First Critique that the work is to exclude any discussion of aesthetics in the sense of a discussion of taste; the work is to be limited to the a priori principles of understanding.

> *Hence it* (the Critique of Pure Reason) *makes our cognitive faculties its sole concern, to the exclusion of the feeling of pleasure or displeasure and the faculty of desire; and among the cognitive faculties it confines its attention to understanding and its a priori principles, to the exclusion of judgement and reason,* (Kant makes it clear later that this reference to reason is to practical reason) *faculties that also belong to theoretical cognition.*

There is, at this stage therefore, no ambiguity in Kant's use of the term aesthetic. It refers solely to usage in connection with the pure a priori intuitions of space and time that enable the possibility, for us, of objects in experience and of our forming an understanding of the manifold of sensation by subsuming it under concepts. This theory of space and time is developed in the Introduction to the Transcendental Aesthetic and is an indispensable part of the account of Kantian epistemology given in the First Critique. The term aesthetic is firmly tied to understanding and concept here. Kant's motivation for doing so was to distance his work from that of Leibniz[34] and Wolff who considered time and space to be abstractions from empirical sensation a posteriori and sensibility to be confused perceptions of a perfect rational order (Caygill 1995, p54). The move by Kant here is, quite legitimately, a disciplinary one in philosophy, but I believe it results in serious difficulties that arise later in the context of aesthetics as a philosophy of art.

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[34] See quotation from Kant at the head of Chapter Two that clearly distances Kant's idea of space and time from that of Leibniz.

As Caygill states, six years after the 1781 publication of his First Critique, Kant published the second edition, and three years later published the Critique of Judgement. In the second edition of the Critique of Pure Reason, Kant makes an important addition to the meaning of the term aesthetic towards the end of the text when he claims that the aesthetic includes the critique of taste (Caygill, 1995, p54).

The critique of taste focuses on the role of our feelings of pleasure/displeasure in the estimation of beauty. With this very significant addition to the meaning of the term aesthetic Kant re-enforces the proximity of aesthetics to his doctrine of sensibility and the necessary conditions for our cognition of objects that he established in the Introduction to the Transcendental Aesthetic in the first edition of the Critique of Pure Reason.

This inclusion of the aesthetical judgement of taste as a meaning of aesthetic that is additional to its original meaning as the science of all the a priori principles of sensibility has the effect of bringing Kantian aesthetics even closer to the dual meaning of aesthetics developed by Wolff[35] (1728) and Baumgarten[36] (1735) whose ambition it was to unite the criticism of beauty with the rules of reason. A linkage between beauty and concept is made here which operates against, indeed contradicts, the claim that Kant makes three years later in the Critique of Judgement that beauty is a feeling in us apart from all concepts.[37]

In the Critique of Judgement Kant makes a fundamental change, rather than a gradual development as before, to the meaning of the term aesthetic. Now aesthetic is separated from the *determinate* theoretical judgements, including not only the judgement of cognition of the First Critique and its correlate faculty of understanding,

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[35] Wolff instituted the dual meaning of the term "aesthetic" as both the science of a priori sensibility and the philosophy of art in general and the critique of taste in particular. For Wolff, however, sensibility was not more than "confused perception of rational perfection" and, if the aesthetic is identical with that, then there is not much room for a philosophy of art.

[36] Baumgarten tried to resolve these Wolffian problems by claiming that knowledge of the sensible and the aesthetic had its own worth because it contributed to rational knowledge. The role of art was to exemplify rational knowledge through providing a sensible image of perfection.

[37] The claim in the First Critique, that implies a link between beauty and concept was made before Kant, in his Third Critique, distinguished between the beautiful and the sublime. In C3 Kant inserts the Analytic of the Sublime between the Analytic of the Beautiful and the Deduction of Aesthetic Judgements. This seems a strange arrangement but might be explained by the by then pressing need to distinguish between aesthetic judgements with conceptual moments (the sublime) and those without such moments (the beautiful) because to proceed to a deduction of aesthetic judgments without resolving this difference would be more difficult.

but is also distinguished from the judgement of practical reason of the Second Critique and the correlate faculties of desire. The aesthetic is now to be the exemplar of a new form of judgement: the *reflective* judgement.[38] The aesthetic is, in other words, now required to form a bridge, to provide a degree of unity, between the faculties analysed in the First and Second Critiques. Such a task is inevitably very difficult because the judgements of pure and practical reason, and their correlate faculties of understanding and desire are already held to be autonomous by Kant.[39] Aesthetics has, I suggest, become somewhat overburdened by Kant's efforts to resolve this problem. I do not want to discuss the reflective judgement in detail just yet because I want to examine it in the context of a discussion of Kantian beauty and before doing that I want to discuss something of Kant's motivation for defining beauty in the overwhelmingly negative and formal way that he does in the Third Critique. For the moment, therefore, I want to stay within the remit of the First Critique because I believe that it is here that an insistent contradiction first emerges that informs the Kantian critique of taste and partly explains much of its otherwise incomprehensible negativity and complexity.

We have already seen that Kant, in the second edition of the First Critique, brings what is soon to become the indeterminate aesthetic judgement of the Third Critique into close proximity to the (determinate) judgements of cognition developed in the first edition of the First Critique. This occurs in the second edition of the Second Critique through the new claim that aesthetic means not only the science of the pure a priori principles of sensibility but also the critique of taste.

Although the judgement of taste is a reflective judgement it is, for Kant, no less important than a determinate judgement because it is true or false in a categorical way, as are the judgements of pure or practical reason. Kant insists that the judgement of taste is valid inter-subjectively, which is to say it is universally valid. Kant's claim that such judgements are *disinterested,* which means that the object of the judgement is not conceptually linked (either cognitively or morally) in any way to the subjective pleasure felt in the judgement. This disinterestedness preserves the

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[38] Determinate judgment already possesses its concept and faces the difficulty of applying it to the multiplicity (manifold) of spatio-temporal appearances, while reflective judgment is the search for a concept for the judgment through this multiplicity. Reflective judgment obeys a peculiar principle - related to feelings of pleasure/displeasure - which enables it to act as a bridge between the theoretical judgments of the "faculty of knowing" analysed in C1 and the practical judgments of the "faculty of desire" analysed in C2. (Caygill, 1995, p54)

[39] As they must be if they are to be free and to give the laws of their operations to themselves.

freedom of the judgement of taste from empirical determination. Kant nevertheless believes (Bernstein, 1992, p19) that the connection between the pleasure and the representation is a necessary (i.e. a priori) one, which it must be if it is to be universally valid for all subjects independently of the empirical properties of the objects of the judgement. Kant needs the claim to universality because otherwise the judgement of taste would be no more than a "*private report on sensation*" and the Kantian judgement of taste would not differ significantly from what was, by then, the established tradition of empiricist psychology. Without the claim to universality, beauty could not be distinguished from the agreeable and the good (CJ, second Moment, prop. 6 and 7) and the disinterestedness of beauty would be jeopardised. As I have indicated earlier in the chapter, I agree with Kant's ambition to establish disinterested beauty as universal, setting it apart from the agreeable and the good. It is relatively easy to see why Kant wants to distinguish the beautiful from the agreeable; if he did not, then beauty would become a private affair for each of us. The result would be the trivialisation of beauty; it is of no philosophical interest or moral and social moment whether I prefer red wine to white because that is taste in the literal and lower sense of the word. The trivialisation of beauty as the gratification of private desires is dangerous because of the *power* of beauty that Kant recognises.[40] To reduce beauty to the merely agreeable is to bring it into the service of mere self-interest and not to allow it the *active* role of promoting the public good.

The relation that Kant claims between beauty and morality is more complex. Kant's claim is that,

> *Now I say that Beauty is the symbol [41] of the morally Good and it is only in this respect that... it gives pleasure with a claim for the agreement of every one else.* (Kant, 1790, prop. 59, Bernard edition, 2000, p250)

As Burnham (p128, 1999) remarks, what is being presented here is an <u>analogy</u>[42] between how judgement reflects on the idea of the morally good and also reflects upon the intuition of the beautiful. Kant is discussing the formal relation between the aesthetic and moral judgements and not the nature of aesthetics and of morality as

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[40] As I do. That is why this thesis is largely about beauty - because I believe it really matters at the moral/political level as well as in aesthetics.

[41] By symbol, Kant means the presentation of a rational idea as an intuition.

[42] As discussed in Chapter One, analogy is independent of content; it is a <u>formal</u> relation between entities and not about the entities themselves. Kant generally does not regard it as a means to empirical knowledge.

such. This is important because for Kant both the idea of form and the idea of reflection are in us, as part of our subjective resources. Reflection, as Burnham emphasises in the passage quoted above, is an ability of our general faculty of judgement, which in the absence of a determining concept, throws us back onto our own subjective abilities in order to come to decisions about intuitions. Therefore, Kant's discussion of the relation between beauty and morality in terms of analogy and reflection emphasises *subjective meaning* at the expense of *objective concept*.

As Burnham also points out, reflection is an activity; and actions tend to become habitual. That, in turn, implies that aesthetic and moral reflection can lead to (analogically related) habits of thought. Thus the aesthetic judgement of taste[43] is not only related to morality but through culture can actively promote it. This conclusion would not have been possible if Kant had only constructed an analogy between the two notions of taste and morality; it would, as Burnham points out, simply be an intellectual curiosity. Because the analogy is in terms of reflective *activity* (action in the world and the construction of meaning rather than statement of fact) then taste becomes an active supporter of morality.

Kant hammers home the analogy between taste and morality by listing the points of formal similarity[44] in the way that we, as I want to express it, "<u>do</u> beauty and morality". I choose to express it in this way because I want to emphasise our performative roles of action and thought and not imply any ontological claim about what either the moral or the beautiful is. Kant's four points of analogy are:

1. Reflection (as reflective judgement) on both beauty and the moral please us directly and not through consequences or purposes.

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[43] Taste now being used in the higher rather than the lower Kantian sense. Kant divides each of the faculties of mind into two forms. The "higher" form means either being independent of (or spontaneous with respect to) the natural world and our experience of it. The "lower" form means being conditioned by the natural world. For example, the higher faculty of feeling (aesthetic feeling, the legislative faculty of which is the principle of purposiveness in judgement without purpose) is the pleasure or pain felt, in the presence or absence respectively, of the beautiful or the sublime. The lower faculty of feeling is corporeal feeling or gratification of accomplishment or satiety, or pain in their absence. It is worth noting, at this point, that desire is not, for Kant, part of the faculty of feeling but occupies its own separate faculty of mind. The higher form of desire (pure desire, its legislative faculty being practical reason) is desire in the exercise of freedom. Its lower form is corporeal desire. Corporeal desire belongs to the faculty of desire –as its lower form – and is not, for Kant, the same as the lower form of feeling.

[44] Referring once again to Chapter Two, it is useful to remember at this stage that Kantian analogy deals in the perfect similarity between two dissimilar things and not the imperfect similarity between perfectly similar things. I claim, therefore, that Kant is not claiming that beauty and morality are perfectly similar, that they are the same thing. Indeed, there is a strong implication, through his use of analogy that they are not. What he is claiming is that the way that <u>we</u> think about them, construct our meaning of them and reflect on them is perfectly similar.

2. Both reflections are disinterested.
3. Both involve the idea of free conformity to law. For beauty this freedom is the freedom of the imagination inasmuch as it is of the same form as the laws of understanding. For morality this freedom is of the same form as the freedom of the will, the freedom of exercising choice.
4. Both are founded upon a universal principle that does not involve determinate concepts of the understanding.

The problem remains as to how we can understand even the mere possibility of freedom within a universe that is entirely determined as necessary by natural law. This is the old problem of the antinomy between freedom and necessity. It is a particularly difficult one for Kant because he recognises that we are both phenomena and noumena, both subject to the laws of nature because we are, in part, ourselves natural and hence subject to the (natural, phenomenological spatio-temporal) laws of cause and effect. Yet at the same time we are noumena, ends in ourselves that are not means to an end through a chain of cause and effect as natural objects are wholly understood to be. I mention this antinomy[45] very briefly because it is relevant to my discussion in later chapters of a narrative of beauty within the terms of contemporary (specifically neuroscientific) biology. More important, in the context of this chapter, is the way that Kant tries to resolve not only this problem of the antinomy of freedom but also the problem of the antinomy of taste: through his appeal to the supersensible substrate of humanity and phenomena.

Kant's appeal to the supersensible substrate, as I discuss in more detail later, is his general way of resolving antinomies that cannot be resolved by other means within his systematic philosophy. It involves a crucial move away from his usual phenomenal approach, how things are possible in experience for us as appearances, and towards an ontological claim about how things are in themselves. The supersensible substrate is an idea of mind that is a realm of "objects" that cannot be experienced <u>in principle</u> yet which are purported to be the ground of all objects of experience. Since we cannot experience these supersensible "objects" it follows that we can have no (Kantian) epistemic relation to them; they are completely unknowable. Because, by definition, they are not phenomena but noumena the notions of space and time are simply not relevant to them, and neither, therefore is

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[45] Which Kant deals with at length in the Critique of Pure Reason (A444/B472).

the notion of causal relations, as we know them, between them. Kant's solution to the antinomy of freedom involves positing freedom as a *supersensible* causality (Burnham, p139, 1999). The Kantian resolution of the antinomy of taste likewise relies upon the idea of the supersensible substrate.

It is at the point where Kant introduces the idea of mind that is the supersensible substrate that, in an important sense, I decide to derogate from complete agreement with him. That is not to say that I part company with him; I am very much in agreement with most of his argumentation and his motives. Though I recognise the philosophical utility, validity and ingenuity of his move to the supersensible, I remain unpersuaded of its practical utility in taking an enquiry into the nature of beauty any further. There are several reasons for my lack of enthusiasm for the idea of the supersensible substrate. I believe acceptance of it effectively arrests further epistemic enquiry into the relationship between beauty, pure reason and practical reason. As I discuss in a later chapter there are severe enough problems with the notion of causality let alone supersensible causality. I accept that the supersensible does, at a philosophical level, neatly solve the antinomies referred to above, yet I feel a sense of disappointment rather than satisfaction because I feel that potentially interesting but different forms of enquiry are short-circuited by Kant's move.[46] I prefer to stick with the antinomies for the time being and see what other narrative I might construct of beauty in relation to cognition and morality. My desire to do that is an important part of my motivation for the rest of this thesis.

Returning now to the discussion of beauty as the analogical symbol of the moral, Kant (1790) summarises his arguments in proposition 60 of his Critique of Judgement with the statement that,

> *"Now taste is at bottom a faculty for judging of the sensible illustration of moral Ideas (by means of a certain analogy involved in our reflection upon both of these); and it is from this faculty..., that pleasure is derived as valid for mankind in general and not merely for the private feeling of each. Hence it appears plain that the true propaedeutic[47] for the foundation of taste is the development of moral ideas and the culture of moral feeling; because it is*

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[46] I later compare my feelings about Kant's positing of the supersensible substrate to my feelings about the opacity of Greenbergian paintings to language and feeling – to borrow a phrase from Rosalind Krauss (1981).

[47] Broadly, meaning the required antecedent teaching or instruction for doing something.

> *only when sensibility is brought into agreement with this that genuine taste can assume a definite invariable form."* (Bernard translation, 2000, p255)

As we have seen from the four points of analogy between the beautiful and the moral listed above, the idea of freedom is crucial for the very possibility of (Kantian) moral action. This freedom is both the freedom from empirical conditions, interest and purpose and the freedom to produce a self-given universal law. These freedoms are not simply the constituents of moral action but are the conditions *for their possibility.* As Burnham (p139, 1999) points out, Kant is not merely constructing an analogy between the procedures of the aesthetic and the moral judgements, but between the conditions that make both judgements even a possibility. Burnham immediately goes on to draw the conclusion that,

> *"Beauty makes visible, and is judged on the basis of something at least closely linked to, the supersensible basis of morality".*

I have two problems with this conclusion. Firstly how can the supersensible, that is, by definition, an object or assembly of objects that are not the ordinary phenomenal objects of Kantian experience but are constituted by noumena, be apprehended visually? Vision is about the presentation of objects that cannot be experienced other than in spatio-temporal terms. Yet the supersensible is entirely apart from spatio-temporality, for if it were not, it would be phenomenal. Certainly, space and time for Kant are not given by objects or by relations between objects but lie entirely within the subject. That does not altogether overcome the problem because we are both phenomena and noumena so that the human subject always contains a heteronomous moment in respect to either. Put another way, I cannot literally see or mentally visualise the supersensible substrate and that is not, I claim, a defect in me but the result of the limitations that I share with all people, in that I am unable to experience objects, real or mental, other than in terms of space and time; the supersensible is not, I claim, a concept because all concepts are ultimately about real objects, not supersensible objects.

My second objection is that even if it were possible to see, in the beautiful, the supersensible basis of morality, it would only be so because we have already presupposed the supersensible to be the basis upon which the moral relies; we have not demonstrated it to be so. We may, I claim, be able to see a basis for morality, but we are not able to see that this basis is the supersensible substrate of humanity and phenomena in anything other than a contingent sense; it might be otherwise.

Because I am convinced of the contingency of this conclusion I feel encouraged to pursue my investigation of beauty beyond this point and look for another narrative that relies on finding a different basis for both beauty and morality. If I do find one, it will probably also be contingent rather than a priori necessary; but that is not the point because it might also be more epistemically productive in that it might at least hold out the possibility of specific insights into how it is that certain particularities of art works are commonly judged to be beautiful.

My reservations in this area of discussion are not confined to Burnham's claim about the visibility, via beauty, of the supersensible basis of morality. In the quotation from Kant given above, he claims that the true propaedeutic (prior study for understanding) for beauty is the development of moral ideas and the culture of moral feeling. That may be so, but I do not think that it is necessarily so because all that has been established (which is not to belittle the value of it) is that, in four respects, the basis for the judgements of taste and morality are analogically the same. I accept that analogical claim but I do not accept the assumption that the estimation of beauty is somehow consequent on the development of moral ideas and moral feeling; I do not accept the hierarchical positioning of morality over beauty, implicit in this statement, as being either necessarily or self-evidently so, though I do, of course, accept that it may be so. It is conceivable that the situation is the other way round, that beauty is the propaedeutic of the moral. It is also conceivable that there is, as it were, a level playing field upon which both taste and moral judgement play, both being supported by some "propaedeutic" that instructs both. Inasmuch as these ideas are contingent they are clearly, at this stage, speculative; I suggest, however, that in this respect, they are not entirely dissimilar to the statements made by Kant at the very end of his Dialectical of the Aesthetic Judgement that I have quoted from above. I stress that I agree with Kant's motivation in associating together aesthetic and moral judgements but I think that, in assigning a hierarchical structure to that association, he is pushing the argument beyond its supports.

Kant is not making the claim that everyone will make the same estimation of beauty and experience the same pleasure in a particular object, but he is claiming that the pleasure taken in the formal judgement of taste is universally valid and is inter-subjective inasmuch as everyone who makes a properly *disinterested* judgement of the object *ought to* find it beautiful. Such a claim is an inevitable result from the judgement of taste being independent of concept and the particularities of both the objective nature of what is being judged and of the subject doing the judging. It is

this formal quality of the judgement of taste that makes it autonomous from other judgements provided that it is not based on concept. If it were conceptually based it would be indistinguishable from the determinate judgements of cognition that discover, via concept, understanding. If the judgement of taste were conceptual it would also be indistinguishable from the (necessary and universal) pure a priori intuitions of the subject (space and time), which provide unity and harmony in diverse empirical sensation. In short, a conceptually based judgement of taste would be redundant because it would provide nothing that is not already furnished to us by cognition.

A philosophical claim to universal necessity demands a deduction. The judgement of taste has to stand or fall on the ground chosen to legitimate this deduction. Clearly the interplay between intuition and understanding (which I have described in the previous chapter and which is common to all subjects) will provide the universality that is required. And this is, in fact, the move that Kant makes to legitimate the universality of his aesthetic reflective judgements, including the judgement of taste. Kant establishes his deduction for the judgement of taste in terms of the pleasure we take from an object being the result only of *our* estimate of its *form*. But, as we have seen, this pleasure is independent of the object being subsumed under concept or of particular empirical sensation from an object. All that is left then is the formal capacity *in us*, which,

> *we may presuppose in all men (as a requisite for possible experience generally).* Kant (1790, prop. 38, Meredith edition p146)

But these universal capacities that enable experience for us are precisely those that are required for the determinate cognitive judgement of objects in general that Kant sets out in the early part of his First Critique.

Commenting on this identity between the necessary conditions for determinate cognitive judgements and the conditions sufficient to validate aesthetic reflective judgement, Bernstein[48] (1992, p20) claims that everything that goes wrong with the

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[48] In this chapter I often refer to Bernstein's commentary on Kantian aesthetics because it is apposite, succinct and accessible. Many, but not all, of Bernstein's comments do not originate, as he acknowledges, from his own work but are grounded in a vast body of Kant exegesis stretching from Kant's contemporaries (Jacobi, Heine, Eberhard etc.) to the major philosophers of late German Idealism (Fichte, Schelling and Hegel amongst others). In the late 19th Century Nietzsche contributed significantly to criticism of Kant and critical response to Kant continued throughout the 20th century. I have limited myself to referring to the work of Theodor Adorno because it is particularly relevant to my thesis. Although I often refer to Bernstein's commentary on Kantian aesthetics I do not always agree with it.

Kantian deduction of the aesthetic judgement goes wrong at this point because of Kant's attempts to,

> *underwrite aesthetic reflective judgements in terms of their connection with determinate cognitive judgements.*

Bernstein claims that Kant cannot, therefore, distinguish between objects for which we may make cognitive judgements and objects for which an aesthetic judgement is appropriate. The consequence is that Kant must allow that all objects about which determinate cognitive judgements can be made are beautiful, thus collapsing into the position taken by Wolff, a position that Kant is trying to avoid. This standard objection to Kantian aesthetics is often summarised in the statement that, because Kant makes the necessary subjective conditions for the possibility of empirical cognition the sufficient conditions for an aesthetic judgement then it follows that all objects must be judged beautiful. If this argument can be sustained, a philosophy of art that differs in a meaningful way from the Kantian epistemology for objects in general becomes impossible (Bernstein, 1992, p2).

I have some reservations that this standard objection to Kantian aesthetics can be adequately sustained in the form that it is put above. I recognise that there is clearly a connection that amounts to an identity between the necessary subjective conditions for Kant's judgement of cognition and the sufficient conditions for Kantian aesthetic judgement. However, I would point out that drawing on only <u>some</u> of the necessary conditions for cognitive judgement do not amount to a reference to the cognitive judgement simply because they lack sufficiency for such a judgement. An example would be a judgement that lacks subsumption under determinate concept, as it would have to if it were to be <u>identified</u> with the judgement of taste. But a judgement that lacks subsumption under concept is not a cognitive one because it lacks an epistemic moment; it is less than cognition. Yet this is exactly the sort of judgement that Bernstein is considering when he comments that,

> *The force of Kant's deduction turns on the unity of the representation of an object present in aesthetic reflection being just the unity present in cognitive judgements when the final synthesis under concept is removed. But this is implausible since it entails that for every object about which we can make a determinate cognitive judgement we can, by abstracting from the final synthesis of the object under a concept, make a valid aesthetic judgement. If Kant is to maintain the tight linkage between aesthetic and cognitive judgements, making the necessary subjective conditions for the possibility of*

> *empirical cognition provide the sufficient conditions for the general validity of aesthetic judgements, then he must allow all objects about which cognitive determinate judgements can be made to be beautiful (as did Wolff).*
>
> (Bernstein, 1992, p21)

Bernstein is identifying the reflective aesthetic judgement with a determinate cognitive judgement "*abstracted from the final synthesis of the object under concept.*" But such an abstracted judgement that lacks synthesis under concept is, as I claim above, not a cognitive judgement. It is simply Kantian sensibility, and sensibility does not, for Kant, amount to cognition because it is not actively epistemic through understanding which requires concept, it is merely passive.

What I am suggesting here is that the identification that Kant's critics have made between the judgement of taste and the judgement of cognition is inappropriate because what Kant's critics call the sufficient conditions for the judgement of taste may be properly identified only with the necessary conditions for sensibility and not with the necessary and sufficient conditions for cognition. The necessary conditions for sensibility are the pure a priori intuitions of space and time. The advantage of linking the judgement of taste to these instead of to cognition is that the very strong link between cognition and taste is weakened[49] and the non-conceptual nature of the judgement of taste is already implied, because Kant has already established in his First Critique, as discussed in the previous chapter, that the intuitions of space and time are not concepts. Additionally, the link of taste to sensibility is not in need of an a priori deduction because it is self-evident; objects must be possible for us if we are to predicate our feelings on them. A link to cognition does not imply, in itself, that all objects of cognition may also be judged beautiful because although sensibility is necessary for cognition it is not sufficient for it.

I claim therefore, that it is the necessary conditions for the aesthetic judgement, rather than the sufficient ones, that are shared with the judgement of sensibility but I do not want to labour this point here, as I shall return to it briefly in this chapter and it will be of considerable importance in the next chapter.

In his Preface to the Critique of Judgement, Kant strives to clarify his position regarding the relationship of the aesthetic judgement to understanding and the correlated relationship of our feelings of pleasure or aversion to cognition.

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[49] If the link to cognition is overly strong it makes it more difficult to establish beauty in relation to the moral because Kantian morality is free from objective determination.

But now comes (aesthetic) *judgement, which in the order of our cognitive faculties forms a middle term between understanding and reason. Has it got a priori principles? If so are they constitutive or merely regulative, thus indicating no special realm? And do they give a rule a priori to the feeling of pleasure and displeasure, as the middle term, between the faculties of cognition and desire, just as understanding prescribes laws a priori for the former and reason for the latter? This is the topic to which the present Critique is devoted.*

In this passage, Kant makes it clear that the aesthetic judgement is not reducible to understanding or to reason and that pleasure/displeasure is not reducible to the faculties of cognition or desire. Yet Kant still considers the aesthetic judgement to be "*...in the order of our cognitive faculties", as* he must if he is to maintain his position in the first edition of his First Critique which, he claims makes "*...our cognitive faculties its sole concern, to the exclusion of the feelings of pleasure or displeasure and the faculty of desire...*"

How, if the First Critique excludes considerations of pleasure/displeasure, can its purely cognitive considerations be compatible with the new meaning of aesthetic in the Third Critique to which feelings of pleasure/displeasure are indispensable? Another question arises: how can the claim made in the Third Critique, that the aesthetic judgement is a reflective one, be reconciled to the claim made in the First Critique that judgement of cognition is a determinate one? The situation might have been better if Kant had been content with the link between the aesthetic judgement of taste and sensibility, the latter being a constitutive element of cognition only. Certainly the link between the First and Third Critiques would have been a weaker one but it would also have been a more sustainable one. A weak link to cognition would, perhaps, suffice to form a bridge but a link so strong that it amounts to an identity not only undermines the autonomy of both the judgements of taste and understanding but even worse, from my point of view, it renders beauty superfluous because it can do no independent work from objects of cognition in general. There are parallels here with the difficulty that Greenberg experienced in claiming both necessity and autonomy for his own particular judgement of taste in painting. What is common to both is the intractable difficulty in reconciling freedom to necessity.

The fundamental problem, as I conceive it, in Kantian aesthetics is that of Kant's positioning. By this I mean that Kant's investigation of the nature of beauty is

conducted within the context of an investigation of judgement itself, the purpose of which is to reconcile through the faculty of pleasure/displeasure, the faculties of cognition and desire which form the subject matter of the first two parts of Kant's critical trilogy respectively. Along with this reconciliation of the faculties of cognition and desire goes the attempt to reconcile their correlate judgements of understanding and reason. This task would have been made considerably easier if Kant had been able to find a single principle from which cognition, feelings of pleasure and displeasure and desire together with their respective judgements of pure reason, aesthetics, and practical reason, could all be derived. Unfortunately he could not find any such principle, and the basic antinomy between necessity and freedom is only resolved by Kant through his presupposition of the supersensible substrate. Kant exegisists differ in their opinions as to how satisfactory this resolution is. My estimation of Kant's resolution is that, although satisfactory at a philosophical level, it limits the possibility of further creative development.[50] The problem, for me as an artist, is that Kantian aesthetics does not offer much help in constructing or interpreting the specific particularities of any individual artwork in relation to beauty. This is why I want to move beyond classical Kantian aesthetic theory. At the same time I want to keep what I think is of great value in Kant's work: his self-critical methodology.

Faced with the apparently irreconcilable difficulties of all the demands that Kant's desire to unify his critical trilogy places on his theory of the nature of beauty I may have to abandon Kant's disciplinary methodology. But before resorting to that I prefer to investigate what might be called a less ambitious project than Kant's synthesis of his three critiques. I want, initially, to see what happens if I replace Kant's strong linkage between the judgement of taste and cognition, which I have already suggested is problematic, with the weaker connection between beauty and Kantian sensibility.

Returning now to the standard objection[51] to Kantian aesthetics, Bernstein (1992, p21) writes that,

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[50] I also have a feeling of unease/disappointment at this move because it seems to me to indicate a rather sudden move towards the sort of metaphysical suppositions that Kant is so critical of in his introduction to (and subsequent arguments within) the First Critique.

[51] The standard objection, that all objects of cognition are also objects of the judgment of taste since they may be judged to be beautiful, is so called because, as Kant was aware, it was part of his own intellectual inheritance from the Leibniz-Wolff-Baumgarten tradition of idealism. The objection was well known, and in that sense a standard one even before Kant encountered difficulties with it that he was unable to entirely resolve. Many of the later critics of Kant mentioned in the previous footnote drew

The force of Kant's deduction turns on the unity of the representation of an object present in aesthetic reflection being just the unity of representation when the final synthesis under concept is removed.

The arguments that I have made above can be expressed in a different way, which is that once the final synthesis under concept has been removed from the cognitive judgement, what we have left to us is not a representation but an intuition. The residue cannot be a representation because it is non-conceptual.

The distinction between representations and intuitions is crucial. Intuitions are about how objects are *given* to us *immediately;* as Kant puts it, an intuition

> *"is that through which it* (an object) *is in immediate relation to us"* (A19/B23)

Intuitions are a phenomenological sense of an object's presence to us, sight as opposed to insight. They refer to simply looking at an object, not to thinking about an object and subsuming it, under concept, to the general. Intuitions are always particular and singular for Kant and he does not use the term to refer to a class or category of objects, which share features in common. It is, I believe, worth noting at this point that Kant insists that the judgement of taste always refers to *a single object* (A32/B47), which he regards as consistent with the immediacy of its relation to us. It is also worth noticing how careful Kant is, in discussing the details of sensibility and cognition and of the relation between reflective and determinate judgements, to resolve the problem in terms of time as well as in space.

I am simply proposing a methodological move at this stage: that we behave *as if* Kant had linked the aesthetic judgement of taste to the intuitions of sensibility and not to the representations of cognition. The power in us that enables such intuitions is what Kant calls sensibility and is passive. It is contingent on the subject being *affected* by sensation. It is not, therefore, a matter of necessity for objects to be given to us as intuitions, because such intuitions are a posteriori to affect and sensation. It is important to distinguish here between intuitions of sensibility and the intuitions of experience, which are the pure a priori intuitions of space and time discussed in the previous chapter. Sensibility is neither a priori (hence necessary) nor is it epistemic for Kant.

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further attention to the problem. The result has been that a very considerable weight of philosophical authority has accrued to the objection.

In contrast, concepts that relate to objects are in a *mediate* relation to those objects. Although once an object has been given to us by intuition it can subsequently be thought about under concepts, even when the object is not presently in relation to us, what allows it to be given to us in the first instance, is not, for Kant, concept, but is intuition (see A19/B33); Kant does not support the (rationalist) view that we can think objects into actuality. Neither does he support the empiricist concept that thought can be derived from sensation alone. The fundamental position adopted by Kant (A230) in relation to intuition and understanding is that the former is sensible and the latter is discursive. These two cognitive functions are mutually irreducible to each other and both are necessary to an epistemic relation between objects and us, such as occurs, for example, in cognitive judgements. Intuitions alone do not bring about cognition.

> *...through mere intuition nothing at all is thought...affection of sensibility alone does not amount to a relation of such representation to any object.*
>
> (A253/B309)

Before proceeding to the next section of this chapter, I want to summarise my present position to the relationship that Kant has established between beauty and cognition. I do not consider the strength of that link to have been particularly useful in providing adequate explanation of the power and importance of beauty in art. Rather I believe that beauty has been fractured and reduced to an instrumental role by Kant's arguments that are primarily motivated by disciplinary, philosophical considerations.

For these reasons I want to refer beauty to sensation and not to cognition. The implications of such a move are considerable and are examined in detail in the next chapter. For now, I simply point out that the result of my proposal to refer beauty to sensation, to what is given to us by an object in intuition, has, at least, the possibility of some explanation as to why we find some objects beautiful and others not. Put another way, I want to shift the focus of enquiry away from the higher legislative faculties of mind (theoretical cognition, practical reason and aesthetic feeling) and towards the lower non-legislative forms of these faculties: subjective associations, corporeal feelings and corporeal desires. Such a move is a shift of emphasis towards the empirical particularities of objects, and I claim that such a move is needed if we are to make any headway in understanding how we respond in terms of feelings of pleasure towards particular objects of experience. On the other hand, such explanations also have the possibility of collapse into brute empiricism unless

we can find something in us, indispensable for the feelings of pleasure that we have from beauty, which is a priori to the specific sensation from an object that we see at a particular time. Whatever that something is, it must be more than the pure a priori intuitions of space and time because these intuitions are common to all objects, beautiful or otherwise, as conditions of their possibility for us. Additionally, that something needs to be capable of providing to us a degree of freedom from the domination of nature as necessity. This freedom is extremely important because it is the ultimate ground of our ability to function as human beings that are noumena as well as phenomena, who are moral, social and cultural beings. It is indispensable to what is required for us to be artists.

Kant fully recognises this compelling need for a moment of freedom in his treatment of beauty. To find it, he turns to the transcendentally free moral subject of his Second Critique. Such a move would, if adequately legitimated, not only provide the required moment of freedom for beauty but also be of great assistance in unifying his critical trilogy. Much as I support Kant's motives in trying to establish a <u>specific</u> link between the beautiful and the moral, I do not believe that he does so. Because the link he has established between pure reason and beauty is such a proximate one, a strong link between practical reason and beauty is required as a counterbalance. Unfortunately the link that Kant does find is a very weak one and, as it relies on the positing of the supersensible substrate (the legitimating ground for both understanding and reason); it is not a specific one. Moreover, I believe that in his effort to link the beautiful to the moral he leaves the former in an even more reduced and fractured condition than before.

For these reasons, I believe that Kant's attempt to reconcile necessity and freedom through beauty in the Critique of Judgement is inadequate for my own investigation of the beautiful. Consequently, I move away from the Kantian position in the next chapter through abandoning any appeal to the supersensible substrate and replacing it by an appeal to a sensible substrate in us: those neurological structures of mind/brain that I believe to be inter-subjective. I do not discuss that move in detail here, but mention it for two reasons. Firstly, I feel that I should make my own positioning, my own agenda, transparent before my discussion of Kantian reason in relation to beauty that I give below. Secondly, I recognise the authority that adheres to Kant's theory of beauty and I need to show good reason why I should question some of his arguments and seek a different unifying ground for a narrative of my own for beauty. That is the purpose of the next section of this chapter.

The Kantian Aesthetic Judgement in relation to Practical Reason

As discussed in the previous section of this chapter, Kant's attempt to link aesthetic judgements to the faculty of knowledge results in an unsatisfactory situation which implies that all objects of cognition may be judged to be beautiful. Such a conclusion is inevitable if the sufficient conditions for the aesthetic judgement are identified with the necessary conditions for general epistemological experience. Kant tries to avoid this situation by claiming that there is some optimal ratio between understanding and imagination that is required for cognition of objects generally and for such cognition to be communicable to others. The basic problem with this argument is that if this optimal ratio is necessary for cognition it is also a sufficient condition for the aesthetic judgement so we find ourselves again in the position in which all objects may be judged to be beautiful. If, on the other hand, this argument is taken together with Kant's claim that the relative proportions between our powers of cognition are different for individual objects we can claim that some objects are beautiful and some are not. This is because not all objects will give rise to the optimal ratio between understanding and imagination that is required for feelings of pleasure in us.

The problem is that Kant does not make clear if it is the subject or the object, or some combination of both, that determines this optimal ratio. The situation becomes very complicated and unsatisfactory. The introduction of the idea of an optimal ratio for cognition not only implies that some objects are more beautiful than others but also that such objects are in some way more knowable than others. Bernstein (1992, p22) points out that such a conclusion is extremely counter-intuitive. I am not entirely convinced by his claim because I believe that we pay more attention to those objects, in both nature and art, which we find to be beautiful.[52] In consequence, our epistemic relation to such objects is prolonged and more likely to be enriched as a result.

I am not claiming that we need to understand an object before we find it beautiful or that prolonged study of any object will necessarily convince us of its beauty. I do not agree with Kant's claim that there is some optimal ratio between understanding and

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[52] Kant claims that we linger in our reflection on the beautiful and in the process of this lingering it seems reasonable that we also think about what we are experiencing thus increasing the chance of our knowing more about the object of this experience. However, my principal reason for raising this point here is that it is very relevant to the biological basis of feelings of pleasure that I concentrate on in later chapters. These theories assign to emotions (as the grounds of feelings of pleasure) a crucial role in motivating all our intentional actions. These intentional actions include mental ones. Broadly, neuroscience regards feelings of pleasure/displeasure as crucial to all human behaviour.

imagination that makes certain objects both more knowable and more beautiful for us. Yet I do believe that the feeling of pleasure that we call beauty in the contemplation of an object enhances our curiosity about it and motivates us to approach it both physically and mentally. The relation between beauty and knowledge is discussed in the following chapters.

Although Kant's argument in terms of an optimal ratio between understanding and the imagination (which latter carries with it a general connotation to freedom for Kant) goes some way to mitigating the severity of the standard objection to his judgement of taste, it comes nowhere near to grounding a claim for a link between beauty and moral freedom.

The fundamental difficulty facing Kant in this discussion is that he lacks any ground for aesthetic judgement that is independent from epistemology. The result is that beauty becomes identified, rather than partially constituted by, the conditions for cognition. Kant rejects a move towards empirical psychology to explain why we find some objects of cognition more beautiful than others. Such a rejection is entirely understandable given not only the empirical methods available to psychology at that time but also, and perhaps more importantly for Kant, his ambition to unite his critical trilogy as a whole. That unifying aim required him to look to his Second Critique to provide a ground, autonomous from epistemology, for aesthetic reflection and the pleasure that results from it.

Kant links the beautiful to his moral philosophy in the Dialectic of Aesthetic Judgement (C3, prop. 59) where he writes that,

> *Now, I say, the beautiful is the symbol of the morally good, and it is only in this light (a point of view natural to everyone, and one which everyone exacts from others as a duty) does it give us pleasure with the attendant claim to the agreement of everyone else, whereupon the mind becomes conscious of a certain ennoblement and elevation above mere pleasure from impressions of sense and also appraises the worth of others on the score of a like maxim of their judgement.*

And a little later in the same passage, Kant writes that the aesthetic judgement,

> *...finds a reference in itself to something in the Subject itself and outside it, and which is not nature, nor yet freedom, but is connected to the ground of*

> *the latter, i.e. the supersensible - a something in which the theoretical faculty gets bound up into unity with the practical in an intimate and obscure manner.*

Kant then goes on to summarise the analogical relationship between the beautiful and the moral in terms of the immediate, disinterested, free, and universal form of the regulative moral and the reflective aesthetic judgements, being careful to point out respects in which they differ. He concludes this part of the Dialectic of Aesthetic Judgement by writing that,

> *Even common understanding is wont to pay regard to this analogy; and we frequently apply to beautiful objects of nature or of art names that seem to rely on the basis of a moral estimate. We call buildings or trees majestic, or plains laughing and gay; even colours are called innocent, modest, soft. .....Taste makes, as it were, the transition from the charm of sense to habitual moral interest possible without too violent a leap, for it represents the imagination, even in freedom, as amenable to a final determination for understanding, and teaches us to find, even in sensuous objects, a free delight apart from any charm of sense.*
>
> (Kant, 1790, The Critique of Judgement, Meredith edition, p223-225)

The first part of this quotation refers to the symbolic nature of beauty for the moral. Kant has just previously made clear that what he means by a symbol is an intuition that contains an indirect presentation of a concept with the aid of an analogy *for which recourse is had even to empirical intuitions.* This recourse is surprising to me, given Kant's insistence in his First Critique, discussed in Chapter Two of this thesis, that analogy is not to be employed in respect of our relation to empirical objects. I interpret it as a measure of his anxiety to link the beautiful to the moral as strongly as possible. More importantly, Kant is not only claiming universality of agreement in the estimation of beauty here but also that we may exact such agreement from others *as a duty.* This introduces the idea of moral value into the judgement of taste and of appraising the worth of other people in terms of their taste.

The second part of the quotation refers back to the supersensible substrate of humanity and phenomena developed earlier in the Critique of Judgement and which is indispensable both to Kant's resolution of the antinomy of taste and as a ground for the transcendentally free subject of Kant's moral philosophy. The analogy between the beautiful and the moral is further re-enforced here.

In the last part of the quotation, Kant makes an argument in socially constructed terms; the appeal to truth-value is in terms of social and linguistic usage. The last sentence of the quotation is particularly interesting to me because it summarises Kant's project in his last Critique: the reconciliation of necessity and freedom through the formal structure of his judgement of taste that is designed so that it may accommodate certain essential features of both pure and practical Kantian reason, thus establishing a unifying bridge between them.

There is not space here to discuss the details of Kant's attempt to reconcile the first two parts of his critical trilogy through the third part and the constraints that such an enterprise places on his aesthetic theory.[53] As discussed in Chapter Two of this thesis, Kant's First Critique is concerned to limit metaphysical speculation through limiting the remit of the products of pure reason to knowledge reached only through a reason that is supported by (Kantian) experience. Kantian experience in turn depends on the basis of Kant's transcendental idealism which holds that space and time are not independent of the human mind but are formal structures of our cognition that make objects possible for us in experience as we experience them, and not otherwise. No claim is made that it is possible to know objects as they are, as things in themselves. Pure reason can only give rise, therefore, to a phenomenological experience and knowledge of the world. For Kant, knowledge is the act of bringing together or synthesising intuitions (which are singular representations from the world that present material to the mind) with concepts (general representations that have their origin in us) in a judgement that both unifies and brings into consciousness what we call cognition or synthetic knowledge of the world. It follows, therefore, that synthetic (Kantian) knowledge that always requires intuitions from the world cannot provide knowledge of things in themselves (noumena) because intuitions are always spatio-temporal.

Kantian epistemology, which is always phenomenological, presents severe problems for the traditional (i.e. pre-Kantian) claim of metaphysics to be able to furnish us with facts about noumena such as God and the existence of an immortal soul, because such knowledge lies beyond, is transcendent to, the limits of our spatio-temporal experience. Conversely, the a priori deductive arguments of traditional metaphysics

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[53] An excellent yet brief synopsis of Kant's freedom of the will in relation to the epistemology of the First Critique that relies on necessary subjective conditions for the categories of cognition is given in Andrew Reath's Introduction to The Critique of Practical Reason by Kant (2001).

cannot provide us with synthetic knowledge because such metaphysical knowledge is based on purely conceptual inference independent of (spatio-temporal) intuition.

The prospect of reconciling the phenomenological and the noumenal view of objects, which is at the heart of the problem of reconciling Kant's First and Second Critique, is not altogether hopeless however. Some hope is provided by the two arguments that follow.

Firstly, although a consequence of the synthetic epistemology developed in the First Critique is that we can know nothing of what lies beyond our spatio-temporal experience, the very fact that we cannot have such knowledge precludes us from proving that there is nothing beyond the reach of synthetic knowledge. There is nothing in the First Critique that prevents us from speculating or making assertions about noumena, should we find sufficient (as opposed to necessary) grounds for doing so. The fact that we can think about noumenal objects does not mean that we can make epistemological claims about them or validate any and all assertions that we might make concerning such objects. On the other hand, the mere fact that we can have no knowledge (that is based on transcendental idealism) of noumenal objects, Kant claims, actually guarantees that propositions that we make about such objects are not inconsistent with the theoretical knowledge of the First Critique. At first sight this last claim is surprising but it follows, as I understand it, simply because of the incommensurability between truth statements about phenomena and noumena.

The second argument that supports the idea that we may reasonably reconcile the first two of Kant's critical trilogy arises from pure reason's demand for completeness of explanation; and this demand for completeness is ultimately a demand for a noumenal, as opposed to a phenomenal, explanation of events in nature. Kant explains events in nature by tracing them back to an antecedent cause that is both necessary and sufficient to explain the event. But our experience of nature is limited to a phenomenal one, to the world of appearances in space and time. Kant goes on to argue that any given event can be explained in terms of antecedent events so that we are faced with an endless sequence of antecedent causes and consequent events. Our search for completeness of explanation can only be fulfilled when we find an event that is not pre-determined by some antecedent cause. Such an event cannot be a phenomenal event because, Kant claims, every phenomenal event requires a preceding event to locate it in space and time as demanded by the law of

natural causality. The demand for completeness of explanation implies, for Kant, the idea of a transcendentally free cause; a cause that does not require any antecedent cause and which must therefore lie outside space and time and is not subject to our understanding. As such the transcendentally free cause cannot be phenomenal but must be noumenal.

The result of the foregoing two arguments is that the clear distinction between phenomena and noumena allows events to be seen as subject to determination by causality when seen as phenomena but as evidence of free causality when they are seen as noumena. All that pure reason has achieved here is to show that it is not inconsistent with the idea of transcendental freedom; it has not demonstrated the reality of such freedom. That demonstration is left for practical reason to supply. This is good news for Kant's architectonic goal for his Third Critique: reconciliation of necessity and freedom, reason and understanding. This goal of effecting reconciliation between the First and Second Critiques is a reasonable enough one and is an obvious explanation of the *interest* that motivates Kant's insistence on the *disinterested* nature of the aesthetic judgement in the Critique of Judgement. Were the aesthetic judgement interested, that is to say concerned with the real existence of an object, then the object would fall under a particular cognitive or moral concept, and the feeling of pleasure would be mediated by such a concept and Kant insists that the pleasure felt in the estimation of beauty is immediate. Kant cannot afford to let beauty be subsumed under either a cognitive or a moral concept if it is to act as a bridge between pure and practical reason.

At issue here is the difficulty that any definition of beauty faces in its role as an analogous symbol of the moral good and its claim to autonomy from moral reason. This distance of the judgement of taste from morality echoes the distance between pure and practical reason. Bernstein (1992, p30) remarks that Kant sees nothing problematic in the duality between knowledge and reason, as evidenced by Kant's writing that states,

> *Understanding and reason, therefore, have two distinct jurisdictions over one and the same territory of experience. But neither can interfere with the other. For the concept of freedom just as little disturbs the legislation of nature, as the concept of nature influences legislation through the concept of freedom.*
>
> (Kant, 1790, Meredith edition, p13)

Unless morality can have some implication for, some effect on, nature (of which we humans are a part - because we can think of ourselves as phenomena as well as noumena) it is pointless. There must, therefore, be some unitary ground common to nature and freedom; for Kant this ground is the supersensible substrate of phenomena and humanity, which is not a principle or a being but simply an idea of mind, unknowable as such, that Kant claims is sufficient to provide the unifying ground that he seeks. Because the supersensible substrate is not a being it is invariant over time, and leads, according to Adorno, to a stasis in aesthetic theory. That well-known objection is not my main concern here. My concern is that the supersensible substrate is epistemologically opaque; to put it simply, it doesn't inform our understanding of what we can know about beauty. The experience of being confronted with the supersensible substrate in Kantian philosophy is not, I suggest, unfamiliar to those who have experienced the paintings of late modernism that adhere to the Greenbergian conditions for painting; both pose the question, where do I go from here? And both fail to answer it. My objection to Kant's posited supersensible substrate is ultimately very similar to Adorno's but proceeds from a slightly different point of view.

Not only is the supersensible completely opaque to knowledge but also it is the ground for Kantian cognition as well as being Kant's ground for moral reason. Because it is the ground for both of these judgements a legitimation of beauty in terms of the supersensible cannot provide a specific link between the beautiful and the moral.

This unsatisfactory situation arises because Kant requires beauty to be both autonomous from cognition and from morality, from nature and freedom. Yet he also wants beauty to provide some connection between the two distinct jurisdictions of knowledge and morality. If the judgement of taste is to form a bridge between understanding and reason then it must in some way disturb and subvert their mutually exclusive jurisdictions. The reverse of this argument is of more interest to me because it implies that Kant's logical separation of the autonomous jurisdictions of epistemology and moral reason must be highly influential on his construction of the nature of beauty. I suggest, therefore, that beauty as such is subverted and instrumentally conditioned by Kant because he forces beauty into a mediating and synthesising role between two dichotomous jurisdictions which, as he claims in the above quotation, enjoy completely separate areas of legislation. As Bernstein writes,

The structural necessity enjoining the destruction of beauty may be encapsulated in a kind of antinomy, the antinomy of aesthetic judgement. It states: The conditions necessary for securing the autonomy of the judgement of taste necessarily exclude the worth of beauty from belonging to it intrinsically. In other words, what constitutes the autonomy of taste necessarily makes the value of beauty contingent, external and instrumental. And this has antinomic force because the pleasure and universality of the judgement of taste are to be regarded as intrinsic to it. (Bernstein, 1992, p31)

This antinomy is played out in the distinction that Kant makes between free and dependent beauties. The former are self-subsisting and do not presuppose a concept of what is the (internal or external) end or purpose of the object of judgement; they do not presuppose what the object is for. In contrast, dependent beauties do come under a concept of a particular end and are consequently conditioned by the concept of that end. Kant claims that when we estimate free beauty we are making a pure judgement of taste and that we must be able to make such a pure judgement otherwise the claim that the reflective judgement of taste is autonomous (from cognition and morality) could not be legitimated. The result of this requirement implies that there can be no free beauties that imply a conception of what the object represented ought to be. But what an object ought to be is not simply an estimate of an object's beauty; it is more than that because it is a concept. Moreover, it is a moral concept. Thus in order to be a free beauty and hence legitimate the pure reflective aesthetic judgement of taste an object must lack any intrinsic moral value or worth, it may be neither good nor bad. On the other hand, objects or representations of objects that are an end in themselves, as opposed to means to an end, and which are of intrinsic moral worth, are never simply beautiful, they are dependent beauties.

We are, therefore, left in the unsatisfactory situation in which free (autonomous) beauties cannot supply the function of being a *symbol of the moral*. Kant's moral theory therefore requires the existence of some objects about which pure aesthetic judgements cannot be made and such objects cannot be concept free, intrinsically of moral worth or ends in themselves. Such objects cannot be simply beautiful. How then are we to form a clear idea of beauty as such that is not inconsistent with a (moral) value system that is based on the individual's power of reason alone?

This question becomes more acutely pressing in the artistic representation of persons. For Kant an artistic beauty is a beautiful representation (CJ prop 49) and if representation is the purpose of the work then the degree of verisimilitude achieved becomes the criterion by which the work must judged as to its success or otherwise. That sort of judgement is evidently not a pure judgement of taste because beauty is not, for Kant, the same as perfection in either the object or its representation. A perfect representation is not necessarily a beautiful representation and a beautiful representation need not be perfectly accurate in every detail. Representations of people in art are intrinsically dependent; they cannot be free beauties, not only because they are representations but also because Kant's moral law requires that we must always treat persons as if they are noumena and never as means to an end. This implies that people or their representations cannot be a means to aesthetic beauty, and further, that representations of people are necessarily constituted by moral criteria. Persons are not, therefore, properly the objects of a pure judgement of taste. Once again, beauty as such has become submerged under the weight of the instrumental role (to moral exemplification) that Kant has assigned to it. For Kant the moral takes precedence over the aesthetic consideration. But beauty is supposed to be the symbol of the moral; to be, in an analogical sense, a moral idea (inasmuch as it signifies a concept of practical reason). How then, can beauty as such be indifferent to, in the sense of failing to evidence and thus support, the moral constitution of persons?

It is interesting, at this point, to compare Clement Greenberg's attitude to representations of people in painting with that of Kant. Greenberg is opposed, as we have seen in the previous chapter, to all "representations of recognisable entities" in painting, be they representations of anything ranging from the "merest outline of a teacup" to a person. In other words, Greenberg is indifferent to the distinction between noumena and phenomena, between moral freedom and the necessity of nature; he is only concerned that painting shall refer to the phenomenal experience of the flatness of the stretched up canvas. As Hickey (1999) remarks, the cost of such indifference is that beauty is denied any place in late modernist painting.

In Modernist Painting Greenberg banishes representations of recognisable objects from painting. Yet the terms recognising and representing refer to the formal role of an active, perceiving subject – as do the feelings of pleasure in relation to a particular object that we call beautiful. Thus Greenberg's prescriptive conditions for painting in modernism exile beauty from painting; all that is left for the perceiving subject is

content, but, in Kantian terms, beauty is formal and is not given by empirical content alone.

Although Kant allows a role for both subject and object in his predominantly formal theory of beauty through his proposal that a certain ratio between understanding and intuition is required for us to experience an object as beautiful, the result is a static conception of form. In the second half of this thesis I draw from the ideas and observations of contemporary neuroscience that allow me to construct a narrative of beauty that is based upon a new and dynamic type of form: one that follows from the reflexive and recursive relationship between subject and object in perception. Such form is capable of encompassing both the noumenal and phenomenal aspects of the human in our experience of beauty.

Kant is largely uninterested in the specificities of painting or any other art works. He is not, however, uninterested in beauty as such, as evidenced by his distinction between free and dependent beauties. Unfortunately, in his attempt to establish a link between beauty and the moral, he is unable to establish free beauties, that is to say beauty as such, that is not already mediated by moral concepts, as a symbol to practical reason, to the moral. The consequence is that beauty itself, free beauty, is alienated from Kantian moral freedom. Kant, faced with a choice between developing a positive theory of the nature of beauty in itself and the pure judgement of taste that is indifferent to practical reason, or of developing a largely negative and formal theory that says very little about free beauty and has to rely on dependent beauty to evidence "beauty as the symbol of the moral", opts for the latter course. The consequence is that, once again, beauty itself has no real place in the discussion.

There is, I believe, a significant similarity between the attitude of Greenberg and Kant to beauty; they are both prepared to subjugate it to their own disciplinary considerations. Another way of expressing this is to say that Greenberg is preoccupied with considerations of what he sees as the demands of Kantian necessity and self-critical pure reason. Kant, on the other hand, and by the time that he wrote his third Critique, is prepared to yield to the primacy of practical reason in any conflict that arises between judgements of pure reason, practical reason and reflective aesthetic judgements. As Socrates remarked (Caygill, 1995. p91), "all beauty is difficult". It is, I suggest, particularly difficult for those pre-occupied with the disciplinary considerations of modernist philosophy.

Returning now to the Kantian anomalies in the domain of taste that are played out in the conflict between his idea and his ideal of beauty, the former signifies a concept of reason and the latter is the archetype and standard of beauty against which all judgements of taste are made. For Kant the ideal of beauty is the embodiment of the rational (moral) idea of persons as being of intrinsic value, of persons as noumena rather than phenomena. I do not subscribe to this view because I claim that the ideal of beauty, the archetype of beauty, should be in terms of beauty as such, beauty unqualified by reference to a rational idea even if that idea is as important as morality. My objection to this claim results from (and is supported by) the objection that I made earlier in this chapter: Kant's privileging of moral over aesthetic reflection is a contingent rather than a necessary conclusion. It follows from the discussion above that, for Kant, free beauties cannot be ideal, as they presuppose no concept, moral or otherwise. Ideal beauties cannot be, as we have just seen, free beauties and so the objects of pure judgements of taste, precisely because they do contain moral concepts. As Bernstein (1992. p37) points out, if there were only free beauties no ideal of beauty would be possible and if there were only ideal (dependent) beauties no autonomous domain[54] of beauty would be possible.[55] The point that I want to make here is that I believe that the ideal of beauty is properly a concern of beauty rather than primarily a matter for practical reason. My more general concern is that the weakness, amounting to failure, of the link that Kant establishes between the beautiful as such (that is to say between free beauties) and practical reason, fails to provide sufficient counterbalance to the link between beauty and cognition discussed earlier. The result is that the aesthetic judgement only achieves its autonomy at the cost of being overly attached to understanding. Such a close attachment begs the question as to how reflective, as opposed to determinate, the Kantian judgement of taste can claim to be.

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[54] Later in this thesis I construct a biologically grounded theory of beauty that claims that the ground of beauty is intimately involved in the activities of theoretical and practical reason. Despite the crucial role that I assign to beauty I do not claim that it is wholly autonomous from reason. My reluctance to do so stems from the lack of any biological evidence that it is and also from my general position on complete autonomy that has been strongly influenced by my reading of Adorno who claims that autonomy must include within itself a heteronomous moment if it is to sustain its own meaning.

[55] Bernstein goes on to give an extremely interesting account of the implications of this paradox and of attempts to resolve it via arguments that rely on the unification of freedom and nature through beauty. He also shows why such arguments ultimately fail. I do not address these arguments here because of shortage of space and also because they also lead to a discussion of the sublime in Kantian aesthetics, a topic beyond the scope of this chapter.

Conclusion

In this chapter I have examined Kant's claim that the judgement of taste is autonomous from understanding and reason and that beauty forms a bridge between necessity and freedom, between humanity as phenomenon and noumenon. I believe that ultimately Kant fails to sustain that claim, and with it fails to satisfactorily unify his critical trilogy. Of much greater concern to me, however, is what I believe to be the problematic idea and ideal of beauty that Kant constructs in his attempt to unite his critical thought. On the one hand the failure of Kant's deduction for the judgement of taste gives rise to the standard objection to Kantian aesthetics: that all objects of cognition may be judged to be beautiful. Kant had difficulty in refuting that objection in a way that has been acceptable to his critics at the time and ever since. The result is that beauty is left, I believe, too proximate to the faculty of cognition and that problematises Kant's claim that beauty is autonomous from pure reason. On the other hand, Kant does not give a deduction for his claim that beauty is a symbol of the moral good that is furnished by the use of practical reason; he claims a deduction to be unnecessary. Whatever we may think of that claim, it leaves beauty, in the absence of any other specific link (the appeal to the supersensible substrate does not provide such a link for the reasons stated previously) to the moral in a very tenuous state that is unable to counterbalance its close proximity to cognition.

My objection to Kant's Analytic of the Beautiful is that its methodology and content are always and already pre-conditioned by, and instrumental to, his First and Second Critiques. The result is, I suggest, that his investigation in the Critique of Judgement can never adequately address beauty as such, beauty free from instrumental concerns, to secure and unify the contents of his previous critical work. Of particular concern to me is Kant's failure to establish a specific connection between beauty and even the Kantian idea of the moral.[56] My reading of Kant, and the identification of specific paradoxes within his arguments that relate beauty to theoretical and practical reason lead me to the issue of the societal contingencies of ideas of beauty. Such contingencies may be drawn from Kant owing to his strong link between beauty and freedom that is indispensable to avoid the domination of nature, of necessity, within aesthetic discourse and so maintain aesthetics <u>as</u> a discursive practice.

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[56] The Kantian idea of the moral is not based on a notion of the good which is either revealed divine truth, self-evident, or ubiquitously desired within a social community, but is grounded in a good that flows from a transcendentally free subject's exercise of her or his practical reason. As such Kant's appeal to moral freedom is ultimately an appeal to reason alone.

In the next chapter I propose that our feelings of pleasure and displeasure and subsequent judgements of an object as beautiful or otherwise are constituted by two entities: the specific empirical sensation by which singular objects are given to us in sensation and the neurological particularities of the human mind/brain. In broad terms, some of these neurological operations are characteristic of individuals (for social, cultural and historical reasons) and some appear to be common to us all. I am interested in both aspects and do not believe that they are mutually exclusive or reducible.

To refer pleasure/aversion and beauty to the empirical nature of both external objects and our internal minds/brains is equivalent to an abandonment of the supersensible substrate for phenomena and humanity and its replacement by a sensible one. One part of this substrate is external to us and the other part is internal to us. The former is phenomenal and the latter resists subsumption under the concepts of either phenomena or noumena because it contains moments of both.

My project is not to claim that our experience of beauty is empirically determined but it is to argue that it is empirically partially constituted both by external objects and the operations of our own embodiment. Beauty, I claim, is not the same as individual affect through sensation. It is more than that because beauty, unlike sensation, requires social agreement, negotiated in our social relations with others, to legitimate its claim to universality. The experience and estimation of beauty must be communicable to be social and to have any moral moment.

Perhaps surprisingly, I claim that it is precisely because we have intersubjective neurological structures of mind/brain that the communicability and the moral nature of beauty is guaranteed as possible for us. Had we not such structures, how could we possibly legitimate our assumption that we can communicate, through facial expression, gesture, language or art, our feelings to others or form any even vague ideas about the feelings of other people? Without such structures how could we, alone as individuals, resist the domination of the necessities of nature or the tyranny of total freedom? I believe that our ability to empathise, and hence the possibility of civilisation, is contingent on our ability to communicate our feelings and to estimate the feelings of others and not simply our ability to have feelings. That is why I want to develop a narrative of beauty that is based on something shared with others in social relations, which is more than a private report on sensation.

The ground that I choose to legitimate my narrative of beauty is ultimately an empirical one. Yet the conclusion that it must therefore inevitably result in a deterministic view of humanity severed from our freedom as noumena, that it must deny the contingency of ourselves and our artistic productions on social and cultural factors, is, perhaps, a little too quick. In making that claim, I have in mind Simon Jarvis's (1998) compelling interpretation[57] of the myth of Odysseus and his crew successfully avoiding destruction in their passage between the twin rocks of Scylla and Charybdis. Odysseus and his companions avoid the lure of the Sirens' song and consequently the ultimate domination of nature (their own deaths) by Odysseus plugging the ears of his crew and lashing himself to the ship's mast. I take the point of this myth to be that freedom (from the determinacy of nature) is only achieved through a curtailment of freedom itself; that freedom must, if it is to prevail, acknowledge its heteronomous moment to necessity.

At the end of this chapter, which both reflects on and criticises aspects of Kant's critical trilogy, I want to describe the position that I adopt in relation to Kant in the second half of this thesis. In the following chapters I re-examine Kantian aesthetics from the standpoint of the rapidly developing discourses of neuroscience. In that project I want to maintain a place for both Kant's critical methodology and his moral values. I do not expect to achieve complete compatibility or commensurability between neuroscience and Kant at the philosophical level of his work. Indeed, complete compatibility would be undesirable because a significant difference between the two paradigms is necessary, in Kantian terms, if both neuroscience and Kantian aesthetics are to be able to obtain a critical purchase on the other. For that, each discipline must (in Adorno's terms) contain within itself a heteronomous moment to the other. This brings me to reflect on the influence on this thesis of my reading of Theodor Adorno's work.

Like Adorno, I have a strong interest in, and admiration for, Kant's critical work. I also want to re-inscribe that work in a way that will make it relevant to the culture of my contemporary world. Though I share Adorno's ambition for a neo-Kantian aesthetic, I adopt, in following chapters, means to achieve it which both differ from those that Adorno employed and also echo them. Adorno looked back to the pre-

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[57] This account is based on the work of Adorno & Horkheimer, 1997 translation, in "Dialectic of Enlightenment" p43-81. Because I prefer the succinct Jarvis interpretation of this Homeric myth, I have summarised it here.

modern, indeed pre-classical, age of mythos in Hellenic antiquity to find the critical tools for his project. He points out, however, that any knowledge of that age is mediated by the largely modernist culture (and its historical antecedents) of his time.

To find my own critical tools, I now look forward to a time when the new discipline of neuroscience may provide us with a richer understanding of the relationship between mind, brain, body and world. The future of neuroscience is as inaccessible to me as the age of mythos in Greece was to Adorno, yet I believe that information and ideas about the dynamical operations of the brain, already furnished by neuroscience, suffice to make a start on such a project in the rest of this thesis.

This point marks a transition from modernism to post-modernism in the structure of argumentation of this thesis. Yet neuroscience contains within itself a significant modernist moment, which I believe, following Adorno, that it must, if it is to sustain its own post-modernism. Similarly, in my painting practice, I want to maintain something of this dynamical relation in which modernist and post-modernist practices play off each other.

CHAPTER FOUR

NEUROSCIENCE, EMOTIONS, FEELINGS AND PERCEPTION

The goal of science is not to open the door to everlasting wisdom, but to set a limit on everlasting error.

(Spoken by the eponymous hero in Galileo, a play by Bertolt Brecht, quoted by P S Churchland, 2002, p1)

This remark may or may not reflect the view of Galileo, but it is, I suggest, consistent with the philosophical project of Kant's First Critique, a major ambition of which was to limit the epistemological difficulties into which reason, unsupported by experience of the world, could lead us. But Kant goes further than that, because his critical philosophy rejects the Cartesian dualism that argues for a separation between the external material world of objects and an internal material world of ideas that is the mind; an idea that presents an insoluble difficulty in explaining how an immaterial mind, with no physical properties whatsoever can causally affect a body that has no mental properties, and vice versa. Kant argues for one world, the world that we experience as we experience it *and of which we are a part,* not as immaterial minds, but as embodied persons *in experience.* Kant claims that the world must necessarily be capable of appearance to us in experience and that we can describe things, including ourselves and others, as appearances only if what we so describe is part of the world, that is to say a part of a material world.

I do not want to imply that Kant's only interest was in a phenomenal, and hence causal, world of matter in its experience by material people. In the Second and Third Critiques Kant's interest shifts towards people conceived as noumena and to our faculty of judgement respectively; both of which ideas are either aporetic or simply contradictory to a purely phenomenal view of ourselves. But I do want to make the point that in the first part of his mature critical work, at the beginning of the epistemological (and hence, in Kantian terms, cognitive) revolution that flowed from it, Kant's methodology relied very heavily on his extensive knowledge of the science of his day. Kant freely acknowledges that fact, as we saw in the second chapter of this thesis, and Greenberg is especially admiring of what he interprets to be Kantian self-criticality because it is developed within a scientific methodology. Moreover, as we have seen in Chapter Two, the critical aspect of Kantian philosophy can be had from a Kant exegesis that is legitimated by his scientific methodology (his Copernican

revolution) without the necessity of an appeal to the transcendental Kantian subject or the supersensible substrate of humanity and phenomena. I take some encouragement, therefore, to venture into the field of contemporary neuroscience, and at the same time expect that I can establish a position that remains basically compatible and commensurate with Kant's critical methodology.

By the end of the nineteenth century questions (and answers) about how material (extensible) objects are or appear to be, previously the domain of natural philosophy, had developed to such an extent that they were no longer considered as an essential feature of philosophy but were re-categorised as science. What remained to philosophy were questions about what we ought to do: ethics, politics and moral philosophy in general - and aesthetics. In recent years there has been a very rapid development in the youngest discipline of science, neuroscience, which is sometimes at odds with the introspective reflections of philosophers about the nature of mind. Philosophers are faced with serious difficulty in providing a theory of mind, not least because most mental activity is out of consciousness and so is opaque to their introspections. The very idea of mind as immaterial and as somehow separate from the material brain is now difficult to sustain. This is why I believe that more progress is likely to be made in theories of mind that do not refer to innate and autonomous faculties of the individual subject's mind, but which refer to the biological and functional operation of the brain and of its relation to other brains. My particular interest is in feelings[58] of pleasure in the experience of beauty. Most philosophers and neuroscientists agree that feelings, including pleasure, are felt within the subject as part of experiencing external objects in the world. The problem is to explain the relation between these subjective feelings and the external objects on which they are predicated, and this problem is particularly acute if, as some philosophers believe, feelings are experienced within an immaterial mind. If, for example, concepts such as causality and necessity are held to be features of mind, can these concepts also be established as features of the external material world? If they cannot, then a problem arises as to how the immaterial mind can have useful and relevant ideas about material objects, or indeed about its own supposed feelings. Broadly, philosophers tend to believe logical procedures in understanding and reason to be the most helpful means of enquiry into such problems, whilst the neuroscientists

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[58] At this preliminary stage of my argument, I am using the word "feelings" in a way that does not distinguish between emotions and feelings. I distinguish between feelings and emotions later, though, in common with most neuroscientists, I do not claim that they are distinct.

believe that, in addition to philosophical procedures, a biological explanation of feelings such as pleasure is helpful.

As discussed in the last chapter, Kant conceives beauty as a feeling in the subject predicated on an external object. Feelings and their precedent phenomena of emotions are of considerable interest to neuroscientists both in themselves and because they form an explanatory narrative of the relationship between the internal mind embodied as brain and the external world.

Before discussing the narrative of mind as brain that neuroscience offers, it is important to note that contemporary science in general and neuroscience in particular does not offer explanatory causal narratives. Rather, it seeks to establish correlations between phenomenal events that are temporally distinguishable and is very cautious about claims that an antecedent event is either a necessary or sufficient cause (or both) of a consequent one; science deals in contingency, not certainty, and has done so for most of the last century. The statistical model of the universe provided by quantum theory remains the dominant explanatory paradigm for all contemporary science and not just for physics. In this chapter and the next I look to neuroscience to supplement and mediate the established philosophical theories of beauty as feeling. The methodology of neuroscience is fundamentally different from that of philosophy in that it deals in correlation and not causality. This chapter, therefore, marks a shift away from prepositional arguments and towards pragmatic ones.

This is not to claim that philosophy is unaware of the problems inherent in the notion of causality. Spinoza's[59] philosophy of mind denies causal, explanatory or conceptual relations between (though not within) the mental (in-extensible) and the physical (extensible) worlds; instead, he claims that the mental and physical are different attributes, broadly, different modalities in Kantian terms, of one substance. Importantly, Spinoza claims only that the ensemble or network of our ideas is causally isomorphic to the network of things, including the things that make up our bodies. The term causally isomorphic implies, I suggest, a correlation between the

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[59] Spinoza's Ethics and his Principles of Cartesian Philosophy address the relation between the mental and physical attributes. These primary sources, though lucid and elegant, are so very succinct that it is difficult to obtain the significance of Spinoza's ideas from them. I have found it useful to refer to Michael Della Rocca's (1996) book, Representation and the Mind-Body Problem in Spinoza for a supplementary explanation of the import of Spinoza's philosophical Parallelism.

forms of the mental and physical worlds rather than a relation between cause and effect that is one of logical entailment.

> *The body cannot determine the mind to thinking and the mind cannot determine the body to motion, to rest or to anything else (if there is anything else).* (Ethics, proposition 2, scholium 3)

Spinoza regards the human body as a mode of extension and his theory of parallelism requires that there be a parallel in-extensible mode, that is to say an idea or thought, for the body. For Spinoza the mind is that parallel idea.[60] As Spinoza puts it,

> *We have shown* (In 2ps) *that the idea of the body and the body, i.e. the mind and the body, are one and the same individual, which is conceived now under the attribute of thought, now under the attribute of extension.*
>
> (2p21s)

This makes it clear that, for Spinoza, the mental and physical modes are simply two parallel representations of the same substance. The distinction that Spinoza makes between mind and body is a descriptive and conceptual one; it is a semantic and not an ontological distinction. Spinoza's ideas were obviously developed in the context of his response to Descartes, but their importance goes well beyond a refutation of the latter's philosophical position; they enjoy an increasing relevance in contemporary thought. Deleuze and Guattari (1988, Ch 6) acknowledge their neo-Spinozan positioning and, more importantly for my own positioning in this thesis, some neuroscientists, most notably Antonio Damasio (2003), regard, their own work as neo-Spinozan.

For Spinoza, the mind, as overall parallel idea of the body, is constituted by a large number of less complex ideas. Each of these "simpler" ideas (Della Rocca, 1996, p24) is parallel to a certain part of the body or to an event that takes place in the body, including what he calls affections (affectio) in the body. Spinoza's parallelism between the body and its representation of itself, its mind, is not, therefore, some vague isomorphism between the body and mind as a whole but is much more akin to a one to one mapping, or correlation, between specific subsets of both modes. Spinoza goes on to claim that the human mind contains only ideas that are parallel to the affections of the body. It is important to remember that Spinoza only precludes

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[60] There is some controversy within the critical discourse about Spinoza as to whether he is referring to the individual body as the object of the idea that is the mind or of a body in general or body in the plural sense of a group of bodies. The problem arises because the original text is in Latin, which does not employ, as Della Rocca (p25) points out, definite or indefinite articles. Della Rocca takes the view, which I accept, that Spinoza is referring to the mind and body of the same individual person.

determination of the mind by the body and the converse; he allows that the two modes are capable of influencing each other through affect.

It is easy to see how Spinozan philosophy appeals to neuroscience; it deals in correlation, a statistical and topological concept with which scientists are familiar and which avoids the difficulties of causality and necessity that have troubled scientists and philosophers alike.[61] Another aspect of Spinozan thought that has particular utility for the biological sciences is Spinoza's concept of conatus. This idea is one of two sufficient conditions for a collection of bodies (Spinoza uses the term bodies in the sense of collective groups of constitutive parts here) to form an individual. The details of the argument[62] are somewhat complex and there is not space to give them here. Broadly, Spinoza is claiming that individuals so behave as to maintain over time the same proportions of their relative motions and positions of rest to each other. The accepted interpretation of this idea is that Spinoza is using the notion of an atemporal fixed proportion of motion and rest of their constituent parts as a sort of portmanteau term to indicate an object's (and this applies to all objects, animate or inanimate, mental or physical) striving to persist, as a coherent whole, over time. In the case of animals this conatus is a striving to remain alive and is strikingly similar to a crucial biological idea, that of homeostasis that is fundamental to neuroscience and is discussed in detail a little later in this chapter.

I have given a very brief synopsis of some of Spinoza's ideas above, in the context of a few remarks about causal necessity, for several reasons. Firstly, I wanted to show that there is a very respectable philosophical precedent for regarding the mental and physical realms as simply parallel representations of the same thing, the same substance. My interest in that is the consequence that neither modality can determine the other or, in Spinozan terms, have any concept of itself other than in relation to the other. This goes some way to subsuming the idea that there is an immaterial mind in control of a material body. Secondly, I want to suggest, following Churchland (2002, p55-58) that,

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[61] Like Hume, scientists have difficulty in accepting that causality really is any less mysterious than the causal connections that it is meant to explain. It has proved extremely difficult to identify the necessity of causality other than in terms of a merely tautological reference to necessity as a property that causally determines. It is has proved impossible to identify causality and necessity as features of the world as well as features of the human mind. Kant certainly established necessity as a feature of the human mind but was not, perhaps, quite so successful in establishing causal necessity as anything that was not merely subjective.

[62] See Della Rocca, 1996, p30-40 for the detailed development of this idea.

A semi-Kantian strategy rooted in evolutionary biology might hypothesise that brains have evolved the capacity to infer causality from certain patterns of regularity observed in experience. Because of the need to make predictions about food sources, predators, and so on, this is a reasonable hypothesis, and it can be empirically explored. Partly <u>because</u> it can be empirically explored, it is regarded by some philosophers as fundamentally irrelevant to the genuinely metaphysical problem (of necessity and causality).

I want to explore this hypothesis in the context of an explanation of our experience of beauty that makes use of the biological knowledge that we now discursively construct. Such knowledge has been obtained empirically as well as by philosophical enquiry. I do not regard these two disciplines as inherently contradictory. As I hope I have demonstrated above in my brief synopsis of Spinoza, not all philosophy is based on ideas of necessity and causality. My third point is that contemporary science is not based on such ideas either because it deals only with the probability of a given event occurring relative to specific conditions.

Though emotions and feelings are often conflated together in common usage, I find it useful to distinguish between them because it facilitates a more productive understanding of both. As Damasio (2003, p29) remarks,

> *The centrality of feeling obscures the matter of how feelings arise and favours the view that somehow feelings occur first and are expressed subsequently in emotions. That view is incorrect, and it is to blame, at least in part, for the delay in finding a plausible neurobiological account for feelings.*

Damasio goes on to explain that simple emotions precede feelings for two reasons. Firstly, emotions evolved in all organisms well before feelings. Even the simplest water dwelling life forms such as the amoeba start life equipped with the means to solve *automatically* the basic problems of survival for sufficient time to enable the average organism to reproduce itself at least. Such means include finding sources of energy, maintaining the chemical balances within the organism compatible with sustaining life in the context of the prevailing conditions, and repairing wear and injury and the effects of disease. All this is accomplished without any apparent creative intelligence or even a brain. The maintenance of the internal condition (the internal *milieu*) of an organism in a state appropriate to its continued survival and

well-being in relation to changing external conditions is called *homeostasis*[63] and is a crucial concept in neuroscientific narratives (Churchland, 2002, p70-75) of emotions and feelings. It is useful for the arguments that follow to identify the four basic emotions and their correlated biological purpose in sustaining the well-being of organisms. These are expressed in terms of action as follows,

fear:	action to avoid a dangerous event taking place in the immediate future.
anger:	action to stop an event that is already taking place.
sadness:	action to recover a situation that has been lost.
happiness:	action to maintain the present status quo.

This list is not a list of autonomous emotional categories and faculties such as Kant might construct and neither does it imply that more complex emotions are reducible to any one of these basic emotions; it is simply a first approximation that is useful in a discussion of emotions. It is relevant to note, at this point, that the oldest, in evolutionary terms, part of the brain of all vertebrate animals[64] plays a crucial role in the production of emotion and intentional behaviour. Such primary behaviour patterns are immediately recognisable by humans in terms of facial expression and skeletal posture. A significant degree of more or less correct emotional recognition is exhibited within all animal species and, to a lesser degree, even between animal species.

Secondly, the capacity to display more complex emotions, characteristic of higher vertebrates, evolved much later and is built upon the simpler emotions of much earlier life forms. The evolutionary timetable for the transition from simple emotions to complex ones is correlated to the development of an increase in brain size and complexity that starts with a swelling of the top of the spinal cord in vertebrates to form a primitive brain and leads to the large brains of mammals and the exceptionally large and complex cortical brain development in humans. The evolution of emotional sophistication is associated not only with increasing brain size and complexity but also with the development of complex intellectual procedures, social structures and cultures that are characteristic of higher primates and humans. This increase in complexity and size of primate brains, particularly the very large and rapid increase in

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[63] The biological idea of homeostasis is similar to Spinoza's concept of conatus mentioned earlier.

[64] The brain stem and the immediately surrounding group of brain organs known as the *limbic system*. See Appendix to Chapter Four.

size of the frontal lobes of humans, is associated with the complex emotional behaviour that is mediated, in humans, by learning, unlearning, sophisticated reasoning, long term memory and by social, cultural and artistic experiences over a lifetime. At this stage of evolutionary development, when emotions are both conscious and significantly mediated by thought, memory and reflection, emotions may also trigger feelings.

Feelings are essentially private because although other people can see the direct and involuntary behavioural results of emotional activity: facial expression, flushing or skin pallor, pupil size, skeletal posture, gesture and respiratory rate amongst others, they cannot see directly the result of our memories, histories, values and thoughts. Because feelings are to do with the *meanings* that we form in our minds, as opposed to the *intentionality* that is directed outwards as action in the world by emotional behaviour, Walter Freeman (1999b, p12 and p193-212) refers to the solipsistic isolation, hence privacy, of our feelings that we alone experience after both we and other people have experienced the behavioural results of our emotions.

I shall return to a discussion of feelings later, but now want to discuss the immediate emotional responses to stimuli (both internal and external to the body) that are initiated out of awareness and are always on public display and accessible to more or less correct interpretation by other people at a time that is only about 250 milliseconds after we are aware (conscious) of them ourselves.

Homeostasis, the maintenance of a constant internal milieu within narrow limits, is crucial to the survival of all animals. As Churchland (2002, p71-90) points out, human body temperature, for example, must remain within only 5° C of 37° to avoid death. Similar tight restraints apply to blood sugar, oxygen, carbon dioxide and a huge range of other chemical levels, to blood pressure and pH. The brain constantly and automatically monitors all perturbations to the internal milieu that have consequences for the health, and thus survival (or, as Spinoza puts it, the persistence in time) of the animal. When it detects deviations from the normal conditions within the internal milieu it produces a set of neuronal responses that set in motion actions by the animal appropriate to restoring it to healthy equilibrium - for example a movement towards food, water and warmth or seeking shelter. Some details of neuronal function in our bodies will be addressed later. For the time being I want to give an overall sketch, at the macro rather than micro level, of how homeostasis can be seen as the biological ground of our intentionality and emotions.

The process of homeostatic regulation of our internal milieu requires coordinated control of our organs, including the heart, lungs, viscera and the secretion and suppression of various hormones. Different configurations of these organs are required for different actions in the external world as an appropriate response to either an internal or external perturbation to the internal milieu, in order to restore it to its optimal condition. The animal requires a means of knowing the state of its internal milieu at any particular time and also of knowing what that internal state ought to be in order to direct its actions (that also require knowledge of the external world) to achieve a return to the optimal set points of its internal milieu. The nervous system (the brain and the entire configuration of nerves throughout the body) provides this means of knowing. In all vertebrates the flow of afferents (broadly the knowledge referred to above encoded in neurons as electro-chemical waveforms) both from the internal visceral organs and from the external world via the somatic sensory system, come together in the brainstem.

The brainstem, together with specialised organs of the brain immediately adjacent to it, generally known as the limbic system, has changed very little over millions of years of evolution, and its architectonic structures are broadly similar in all vertebrates, including humans. The large and complex development of the human brain has evolved, quite literally as well as metaphorically, on top of the limbic system and is far from independent of it. Damasio (2000, ch 2) argues that this evolutionary gestalt process indicates that the limbic system plays a pivotal role in our self-representational capacities as well as its regulation of autonomic functions within the body.

In the above discussion I have referred to the need for the nervous system to know certain "qualia"[65] of the interior and exterior world, in order to organise appropriate

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[65] I have placed *qualia* in inverted commas here to distance myself from the way in which Damasio uses the word. For Damasio (2000, p9), qualia are "the simple sensory qualities to found in the blueness of the sky...the sound of a cello...the fundamental components of images [of which perception allegedly consists] are thus made up of qualia".

As Bennett and Hacker (2003) point out, Damasio is shifting the philosophical meaning of qualia away from the qualitative characteristics of <u>experience</u> and towards the characteristics of <u>objects</u> of experience. Bennett and Hacker (2003, p271-292) contend (and I concur with them) that experiences may intelligibly be described as <u>possible</u> subjects of attitudinal predicates; that is to say they may be agreeable or disagreeable, wonderful or dreadful etc., that is to say qualia are about the subjects affective attitude, and not about the <u>actual</u> subjects of attitudinal predicates. For example, if smelling roses and smelling lilac are both described as delightful then it is, so Bennett and Hacker claim, obviously false that every distinct experience can be individuated (picked out) by its distinctive qualitative character, or quale. Yet it is the qualitative character of the object, be it a rose or a lilac, which individuates the experience; the smell of a rose is qualitatively different to that of a lilac, though we may delight in both. In using the term qualia it is important to be clear about whether one is referring

visceral conditions and motor responses to optimise the state of the body's internal milieu. This is not to imply that there is some "immaterial subject within the material subject", some ghost within the machine, to which the nervous system presents epistemes for evaluation and action directed at both internal and external objects. Neither is it to imply that the nervous system is a store of past sensations to which incoming sensation is compared in order to evaluate it and act accordingly.

Freeman (1999b, p10 -11) claims that the brain is an "open system" for sensation. By this he means that sensation as such is not stored in the brain but passes through it. As it does so it modifies in a subtle way the immensely complex, ever-active wave patterns of neuronal activity in the brain. Freeman claims that it is sense input qualified by an organism's history, learning and feelings that remains encoded in the dynamics of synaptic discharges between neurons at the local and global levels of brain activity. That is what Freeman means when he states that the brain retains meanings and not sensations. In support of his claim he cites extensive experimental evidence that animals exposed to exactly the same stimulus at regular intervals display patterns of synaptic activity that are recognisably specific to a particular animal and to a particular stimulus, but are always very subtly different to the previous patterns observed in response to the same stimulus. He concludes that emotional and intellectual mediation of sensation is required for memories stored as meaning in the brain. What the brain knows is constituted by the wavelike patterns of activity (and inactivity) of many millions of neurons that is immensely complex and varied and yet is remarkably stable over long periods of time – though it does exhibit very short-term instabilities. Many neuroscientists claim that this neuronal activity *is* the brain's function of knowing. Patterns of neuronal activity will be discussed later, but for now, I want to return to the functional operations of the limbic system.

As already discussed the brain has to respond to both internal and external information to maintain the life of the animal. The brain has to organise the afferent input received from all the different senses and integrate them into a coherent whole, because in order to operate effectively in the world the body must perform as a coherent whole. Churchland gives the example of an animal with low blood sugar levels. Clearly the animal should be looking for food, as prompted by its nervous system, and not fleeing, unless flight is an immediate requisite for survival.

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to the subject's affective attitude or the sensory characteristics of the objects of experience. Perhaps the term is best avoided altogether.

Additionally, the animal may be thirsty as well as hungry; there may be both predators and potential mates nearby. The animal must choose between options available to it. It cannot do everything it needs to do at once and some options, such as flight or fight, may need to be done very quickly. Animals need to integrate and evaluate afferents and prioritise certain actions amongst all possible actions. In short animals have to make up their minds about what to do now.

It follows that neuroscience sees the nervous system as setting in motion the initial actions of animals in response to external afferents, broadly, different sensations, by making some afferents pleasurable and some not. Enter beauty! Emotions can be thought of as making us pay attention to events in the outside world and respond to them by taking actions appropriate to optimising the state of our internal milieu, optimising the homeostatic conditions of our bodies. (See Damasio 1994, Cytowic 1996, cited in Churchland 2002, p406 and 427 respectively). Emotions are aptly named in the English language because they are about evaluating possible motions, possible actions, as a result of immediate experience of pleasure or displeasure. Emotions are the ground of goal-directed actions. The end to which this purposiveness is directed is the self-preservation of the animal, the good of the animal. Because of technical limitations, neuroscience has so far restricted its field of study to individual animals and people. However, there is growing interest within the discourse in finding neurological explanations for observed social behaviour in both animals and humans. The technical problems are formidable but, given the level of current interest in such a project, and the lack of in-principle obstacles to it, significant progress may reasonably be expected in this field. For that reason I believe that neurological studies of emotions and feelings offer the possibility of providing a ground for ethical action.

Since some animals, such as humans, can only achieve optimum homeostasis (such as mere survival at one end of the scale up to a secure and pleasurable life-style at the other end) through social grouping together, emotions are relevant to the good of society; they have a moral function in the wider social sense of the term. The fact that our emotions are not private but are public events that form the basis of inter-subjective communication that is indispensable to social grouping emphasises their potential function as the conditions for the possibility of moral actions.

What I am suggesting here is that emotion rather than transcendentally free (Kantian) reason is the basis of moral action. Moreover, emotional behaviour is, in

neurological terms, contingent upon pleasurable or aversive experiences. The possibility opens up, therefore, of establishing a direct link between beauty and moral behaviour that is legitimated by those aspects of human emotional function that are inter-subjective because some of the immediate, non-conscious operations of the nervous system are common to us all. This is not to claim that all, or even most, human behaviour is determined by biology alone. I shall return to the relation between beauty and this "sensible substrate of phenomena and humanity" in more detail later in this and following chapters. For now, I want to clarify my position in regard to this brain-generated and goal-directed activity by humans and other animals which results in emotions and which Freeman (1999b) calls intentionality.

As Freeman (1999b, p10 et seq.) points out, goal directed activity, when performed by humans, but not by other animals, is often referred to as volition: the result of will. It is widely assumed that only humans have the capacity to will their actions. Freeman claims that there is a neurological basis for intentional action by both humans and other animals that operates without will. The basis for his claim is that humans share with animals what is essentially the same neurological system in and immediately around the brain stem that allows all vertebrates to have what he calls intentionality. This is the ability to direct action towards a future outcome chosen by the animal "in accordance with their own growth and maturation", that is to say, in accordance with biological homeostasis.

Intentionality is not the same as will because it is directed by emotion rather than reasoning, is immediate and usually non-conscious. Intentionality does not preclude the operations of will subsequently inhibiting or reinforcing the initial intentionality of persons. Intentionality is different from motivation, the reasoned explanation of an action, and is distinguished from desire, the awareness and experience that follow from an intent.

Damasio (2000, ch2) makes a distinction between emotions, feelings and known feelings, thus implying that feeling may be unknown as well as known to us. He claims that feelings are inwardly directed towards the mind rather than outwardly directed, as are emotions, into the world. Feelings follow upon and are engendered by emotions. The notion of unknown (i.e. unconscious) feelings is somewhat counter-intuitive. It seems reasonable to assume that if we feel an emotion we must know that we are feeling it. Damasio argues that this is not so because the organism may represent in neurological and mental patterns a state that we call feeling without

being aware of that internal state. He claims that there is a great deal of evidence to suggest that we are not always aware of our feelings. Damasio gives, as example, the experience of realising that we are happy and knowing that we had been happy for some time before we realised it. That is true enough, but I suggest that a more general explanation is needed and may be had from the idea of feelings as parallel actions of mind to correlate emotional actions of the body.[66] If the emotions that accompany immediate intentionality expressed in physical actions are out of awareness, there appears to be no reason why their mental representations, feelings, should not be so too.

The third stage of the continuum of these biological processes is the state of feeling made conscious. Consciousness of feeling is needed if we are to be influenced by it beyond the immediate present and is intimately bound up in the notion of self, as the conscious feeling we have of ourselves as a conscious entity that experiences feelings and which persists in time.

At this point it is probably useful to summarise what I mean by the term emotion and then to discuss how emotion may be related to consciousness. My summary of emotion proper is taken from Damasio (2003a, p53) for the sake of brevity and clarity. However, I have reservations about Damasio's definitions of emotions and later in this chapter I introduce certain qualifications, even contradictions, taken from other authorities.

1. *An emotion proper, such as happiness, sadness, embarrassment, or sympathy, is a complex collection of chemical and neural responses forming a distinctive pattern.*
2. *The responses are produced by the normal brain when it detects an emotionally competent stimulus (an ECS), the object or event whose*

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[66] That is to say, following Spinoza, feelings are the idea of the body by which the body represents itself to mind. The mind does not need to pay attention to all these feelings the entire time any more than it needs to pay attention to all the actions of the body all the time.

Freeman (1999, p35-40) addresses this issue in terms developed by Thomas Aquinas. Briefly, Aquinas held that the body does not absorb stimuli from the world in an indiscriminate way, but changes its own form (assimilates itself to) only those stimuli relevant to its intent at a given moment. Thus forms of the world are created inside the self by achieving similitude of the self to stimuli that are relevant to present intentionality. Crucially, Aquinas's concept of the unitary nature of self implies that (conscious) perception (the organisation of sensation and construction of meaning) is a one-way process; it proceeds from us into the world. Were the process the other way round, we would be entirely overwhelmed by conscious perception of all the stimuli presented to us by the world. Our selective and unidirectional perceptual system matches our limited capacities of awareness to the infinite world beyond the self. Freeman claims that the body and brain are "open systems" with input and output of matter, energy and sensation, but in regard to the conscious organisation of perception and construction of meaning, they are closed.

presence, actual or in mental recall, triggers the emotion. The responses are automatic.

3. *The brain is prepared by evolution to respond to certain ECSs with specific repertoires of action. However, the list of ECSs is not confined to those prescribed by evolution. It includes others learned in a lifetime of experience.*
4. *The immediate result of these responses is a temporary change in the state of the body proper, and in the state of the brain structures that map the body and support thinking.*
5. *The ultimate result of the responses, directly or indirectly, is the placement of the organism in circumstances conducive to survival and well-being.*

Although I recognise the general relevance and value of Damasio's conclusions listed above, I adopt a narrative that differs significantly in emphasis from his. In the rest of this chapter I develop a model of the brain in terms of the dynamics of self-organising systems. Damasio's model is, I suggest, that of a passive brain reacting to external stimuli, and the logical arguments he deploys broadly adhere to the tradition of linear causality. I believe a system dynamic based on recursive and reflexive relations to be more useful and my narrative position in the rest of this chapter flows from that belief.

Later in this chapter I describe the positivist-pragmatist model of neuroscience in detail. Not only does this model signal a crucial shift from traditional linear and circular causality to recursive and reflexive relations between non-discrete (non-autonomous) regions of the brain, but it also constructs a nested system of reflexive and recursive loops of information transmission. The description of brain activity that this model offers subsumes the meaningfulness of the terms causality and autonomy. That in turn has profound implications for the Kantian theory of beauty as taste and is discussed more fully in the next chapter.

I prefer to avoid the implied ontological claims that Damasio makes in the five definitions quoted above because I believe that it is sufficient for my narrative to appeal to the very extensive body of published experimental evidence that merely establishes a correlation between emotion and specific brain patterns of electro-chemical neuronal activity. By emotion-proper, Damasio means emotions of a culturally/socially more mediated nature than the primary emotions of fear, anger, and sadness, happiness discussed earlier. Damasio constructs a linear gestalt system in which feelings are built upon emotions (that in turn are divided into a

hierarchical system of social emotions, primary emotions and background emotions). Below the level of emotions lie the strata of drives and motivations, which in turn are built upon pain/pleasure responses. At the very bottom of the tree are the "homeostatic roots" of the entire system: immune responses, basic reflexes and metabolic regulation. Broadly, as one ascends the gestalt, one progresses from unconscious to conscious emotion. Many authorities prefer the term awareness to that of consciousness because they think it avoids connotations of Freudian theory, thus sidestepping arguments about the meaning of the unconscious within the Freudian paradigm. For the same reasons I prefer to use awareness too.

Damasio freely acknowledges that his linear gestalt of emotions is a simplification given as a useful introduction to a complex neurological system. His simplified approach leads, I suggest, to the idea that emotional activity and its neurological correlates can be adequately understood in terms of purely bottom up processing that is initiated by sensory input and which consists of a simple linear gestalt model of brain activity in which only certain discrete and relatively few highly functionally specified regions of the brain are involved. Such a model ignores the endogenous nature of intentionality and emotion (Freeman, 1998). Damasio's treatment may result in the impression that the role of the subject in respect to intentionality and emotion is almost entirely a passive one, initiated by sensation and determined by simple linear causal processes between immutable and culturally unmediated areas of the brain that are largely autonomous from the activity of the brain taken as a whole, that is, autonomous from macro-neuronal brain activity. I do not believe such conclusions to be compatible with contemporary neurobiology, for the reasons I shall discuss in the next section of this chapter.

Freeman, in a review paper given at the Department of Molecular and Cell Biology at the University of California (Sept 1st 1998) puts forward a narrative claiming that emotion is involved in all intentional behaviour. This paper is wide-ranging in scope, philosophically well informed and refers to contemporary neurological theories that have resulted, to a significant extent, from the author's own research and that of his colleagues. Because of the scope and complexity of Freeman's work I do not attempt to summarise it all here but will refer to those aspects of it relevant to my arguments as the need arises. At this point, in commenting on Damasio's definition (his term) of emotion, I should make it clear that Freeman tends towards the *activist-pragmatist* model of brain function. The distinction between the models of stimulus

response determinism and activist-pragmatism is an important one and a diagrammatic representation of both is given in Appendix Three.

The stimulus-response or passivist-cognitivist model

As may be seen from these diagrams the stimulus-response determinist view (also generally referred to in the literature as behaviourist or cognitivist) is a bottom up process. It is initiated by sensory stimulation; that is to say by sensation from objects outside the nervous system itself, even though such objects may be inside the body (visceral organs for example) or at the interface of the body with the world (the skin including the specialised retinal sensory receptors). The information provided by sensation enters the brain stem and is transmitted upwards via neural pathways (successive synaptic transmission from one neuron's axon (output channel) to another neuron's dendrites (input channels) – see Appendix Three for a brief discussion of neurons) to the thalamus. This flow passes through the hippocampus on its way to the thalamus. The hippocampus plays an important role in the ordering the information flow in spatio-temporal terms. The function of the thalamus is to sort the information for transmission to areas that are functionally specific within each of the primary sensory cortices: the visual, auditory, somatic, etc cortices. An important feature of the thalamus is to order the incoming information from the sensory receptors in terms of priority for attention and subsequent action or inaction. Each of the relay nuclei within the thalamus tries to suppress the activity of its neighbours so that the nucleus most strongly excited is sure to fire its synapse and transmit its information onwards. The purpose of this competitive selection is to ensure that the organism's attention is focused onto what matters most in the short term. This winner takes all strategy is thought to have evolved as a survival mechanism.

The primary cortices have receptor neurons that synthesise the incoming information from the thalamus so as to form what are called "features", the primitive elements of sensation such as lines, colours and tones. Situated adjacent to the primary cortices are association areas which form representations of objects that are forwarded to the frontal lobes which in turn assemble the representations of objects into concepts and attach meaning and values to them.

This stimulus-response model is broadly similar to Kant's explanation of the way we relate to objects in the world. The subject receives sensory input from the world, in Kantian terms empirical intuitions. This input is spatio-temporally encoded by the operations of the hippocampus and thalamus; in Kantian terms, it is ordered by the

pure a priori intuitions of space and time. Representations are sent to the frontal lobes, where concepts are formed and meanings and values attached. The Kantian equivalent of this last stage is the operation of pure reason and practical reason that are, broadly, equivalent to understanding and moral evaluation.

The organisation of action output that is the motor system is very similar to the simplified account given above of the input process of perception, but in reverse. Motor output begins in the frontal lobes (where perception has just occurred) and proceeds downwards directly to the brain stem and indirectly via the amygdala. The frontal lobes are the site of rational selection and organisation of motor activity in respect to the perception of objects that have resulted from the synthetic processing of sensory input. The function of the amygdala, in this model, is interesting; the amygdala is an organ lying symmetrically on either side of neural pathways that conduct the flow of motor commands to the brain stem and thence, via the spinal cord, to muscles that move the body. The output from these amygdalic side channels rejoins the main channel and mingles with the neural synaptic discharges that are flowing down it.

The output from the side channel that contains the amygdala is thought to emotionally qualify the main output channel; it "colours" the (rational) command signals with "emotional dye". There is a very considerable body of evidence to support this view from the late 1930's to the late 1970's. Much of that evidence resulted from clinical surgical practice on patients with dysfunctional amygdalae or behaviour patterns, or both. Such evidence is not without its problems, as I shall discuss later. More recently, however, experiments with improved imaging technology[67] have supported the view that the amygdala is involved in all expression and experience of emotions. However, most of these studies are of fear responses, and I wonder if it is entirely valid to generalise the conclusions to other emotions. LeDoux (1996) has similar reservations; he points out that specific emotions have developed over long periods of time for very different purposes and claims that it is a crude assumption to talk about all the different emotions as one package.

Freeman (1998) points out that the path of argumentation in the above stimulus-response determinism model is one of linear causality and that is a very problematic aspect of the theory, as I shall discuss shortly. This model is based on simple

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[67] Particularly the development of functional magnetic resonance imaging (fMRI), which is capable of very high spatial resolution of active areas within the brain.

mechanical ideas despite its apparent complexity. It is not unlike understanding how a car moves through space and time; the fuel is metered into the engine, the sparking plugs fire, the pistons go up and down - and eventually the wheels go round. It is certainly true that if the crankshaft is removed the car will not move, but that does not legitimate the claim that the crankshaft causes the car's motion, only that it is indispensable to a normally functioning car. Similarly, clinical observation of behaviour patterns in higher primates that have, for various reasons, severely damaged regions of the brain, does not prove that the regions in question are the causal origin of the normal behaviour patterns that are missing in the damaged subjects.

Freeman's specific objections to the above model are that it cannot account for expectant or anticipatory action for which no sensory stimulus is yet present, and it underplays the role of the amygdala that, as he claims, is known to be involved in, or even indispensable to, the formation of explicit memories, the colouring of motor responses with emotions, and movement of the body in relation to spatio-temporal abilities such as planning a path from where we are to where we want to go. More generally, and more philosophically, Freeman's objection is to what he sees as the Platonic stance of this model. As he writes in his paper Emotion is Essential to All Intentional Behaviours referred to above,

> *Representations of objects and events are stored in memory banks as ideal forms, each having attached to it a label as to its value for the organism, and they are used to classify new* (sensory) *inputs by retrieval, cross correlation, template matching, error reduction... and assignment of value by passage through the emotional generators of the brain in the basal ganglia and brain stem. Questions of how the brain can a priori create its own goals and then find the appropriate search images in its memory bank are not well handled. The loss of the Cartesian pilot has left a large gap in the theory, because no one wants a homunculus, but cognitivists have no replacement.*

I agree, in general terms, with Freeman's synopsis of the stimuli-response determinist (i.e. cognitivist) model apart from the reservation that I have concerning his use of the term *a priori.* To use that term is to run the risk of collapsing into something like the Cartesian dualist dichotomy between the inner and outer worlds that he is in the process of criticising. Moreover, its use implies that the alternative model, the activist-pragmatist model or self-organising brain model is premised upon a priori reasoning. I do not believe that such an implication is helpful because the

activist-pragmatist model does not proceed linearly from an a priori origin. Instead it is couched within the recursive and reflexive terms of non-linear dynamics. Such systems involve nested loops of reflexive relations within which it is meaningless to identify one element as the causal origin. Within such systems, which encompass both the internal and external world, the distinction between reasoning that is a priori or a posteriori, together with the Kantian necessity that adheres to a priori (including, I believe the synthetic as well as the analytic a priori) is largely subsumed.

The activist-pragmatist (self-organising system theory) model

A schematic diagram showing how perception occurs in mammalian brains in general within the terms of this model is shown in Appendix Three. It begins in the limbic system within the medial temporal lobe situated at the top of the brain stem. The limbic system sends signals to the brain stem to increase the inflow of sensation, to increase sensory receptor activity to a high level. At the same time signals are sent from the brain stem to the primary sensory cortices (that are dedicated to specific functions such as vision) to alert them to the hugely increased input of sensation that will occur some 100-300 milliseconds later.

Similar signals are sent to the body's musculature to alter its posture to the most favourable position to receive the anticipated sensation and to prepare for anticipated action. The incoming sensation is sent to primary sensory cortices[68] and thence to the entorhinal cortex,[69] which lies immediately above the limbic system and contains the hippocampus. From the hippocampus the now spatio-temporally integrated and sorted sensation goes to the limbic system; we are now back where we started our narrative of the process of perception.

The process now repeats itself but with a crucially important difference. On the second trip round the perceptive loop the entorhinal cortex is not only receiving new sensory information via the sensory receptors but is now also receiving the

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[68] Except for olfactory sensation, which feeds directly into the entorhinal cortex. The olfactory system is, in evolutionary terms, the oldest of the senses. The other primary sensory cortices are built (quite literally) on and around it; their operation is more complex but their architecture is nevertheless evidently a development from the olfactory model.

[69] The area in question involves not only the entorhinal cortex but also parts of the surrounding neocortex and I refer to both of these areas in using the words entorhinal cortex. The term entorhinal originally designated the area of the brain that processes the sense of smell and this is rather confusing because the entorhinal cortex and neocortex are now thought to have a much wider role in coordinating all of the senses and, in exchanging information with the hippocampus, to play a crucial role in ordering phenomena in spatio-temporal terms.

processed/integrated signals from all the primary sensory areas in the cerebral cortex. This is because the entorhinal cortex sent all the initial information received, after processing in spatio-temporal terms by the hippocampus, to all areas of the cerebral cortex which then processed it according to their specific functional activity and are now in a position to return it in mediated and integrated form to the main organising structure of the brain which is the limbic system in the entorhinal cortex.

A remarkable feature of the entorhinal cortex is that it does not send all this newly refined, mediated and integrated information downwards to the muscles, viscera, sensory receptors etc.; only about ten per cent of its output signal is directed outwards from the brain and around the external loop that includes both the self and the world. The other ninety percent is for internal circulation around the cortex, either directly or through the thalamus. Freeman claims that these internal loops between large interconnected populations of neurons that we identify as having specific functions within the brain are the basis for learning, memory, reason, culture history,

> *...for all the unique quale of emotion in each of us, which is our inner experience of impending action.*
>
> (Freeman 1998, p11)

In a very real sense, I suggest, the activist-pragmatist model of the brain constructs a dynamic and largely self-organising system in which the detailed interaction and persistence over time of many thousands of related reflexive loops constitute an ensemble of (internal) qualia; and it is the unique nature and relationship between these qualia, persisting yet always subtly changing as a result of new experience, that we habitually refer to as the self.

The positivist-pragmatist model is a move away from Kant's static formulation, based on the operations of autonomous faculties of mind. This shift is towards an action dynamic where all areas of the brain are involved in very rapid reflexive operations with each other that are repeated, in constantly changing ways, many times each second. The result is that the autonomous Kantian faculties seep into each other, mediate and are mediated by each other, and can no longer be meaningfully regarded as autonomous. This theoretical change is crucially important to a new understanding of beauty and ethics based on emotional responses.

In the above brief summary of the activist-pragmatist model of the mind/brain I have given an extremely simplified summary of the central core of the perceptive loop only. Many of the details of the loop have been lumped together in an attempt to avoid an

overly technical description. There is a very real difficulty in describing systems that involve reflexive feedback loops, not least because most of us are accustomed to thinking in linear causal terms from origin to the end of the chain of argument. In reflexive and dynamic systems that are not initiated by some external cause there is no origin, end, or causality, as we commonly understand it.

In the last quarter of the 20th century a new way of conceptualising the non-linear dynamics of self-organising systems emerged. Indispensable to that development was the hugely increased power and speed of very large computers. Anyone with a mathematical background will appreciate the analogy between the process of the (simplified) feedback loop of perception described above and the iterative solution of equations for which no analytic solution can be found. They will also recollect the extreme labour and tedium of solving even simple non-linear equations soluble by non-analytic means only. People are very bad at performing tasks which start with a best guess approximate solution which is fed into an equation and produces an approximate solution which, in turn, is fed back in again; and so on many hundreds or even thousands of times. They cannot maintain concentration or recollect the individual steps of such a process. Computers, in contrast, are very good at this sort of work and can now perform it thousands of millions of times faster than people. The results of such endeavours are sometimes in marked contrast to the tedium of the process; they are extremely interesting and complex mappings and images such as the fractal diagrams that have passed into popular culture. These diagrams are visual exemplars of chaos theory and non-linear system dynamics applied to self-organising chaotic systems. The brain is one such system and contemporary neuroscience applies such techniques to its understanding. Freeman (1992) claims that,

> *The theory of chaos and non-linear dynamics, when applied to the functions of brains, can answer the fundamental mystery faced by the concept of intent, by showing how goals, their attendant values, and the creative actions by which they are pursued can arise in brains. Every intentional act is preceded by the formation of its character prior to its execution. And if perception is active, then things that are perceived in the body and in the world must in an important sense pre-exist in the sensory cortices as the predicted consequences of the act of searching.*

I am not clear why Freeman qualifies the last sentence in terms of searching. Presumably he is referring to situations in which the object in the world or body that

the brain wishes to have some relation to is not actually present to the senses; that is to say Freeman is using the word searching in the sense of anticipation, need or desire for, or expectancy. This passage from Freeman, taken together with the activist-pragmatic view of perception outlined above, has obvious resonances with the pioneering work of Merleau-Ponty (1962), in particular to his outward "arc of intentionality" into the world. Freeman's position within the activist-pragmatist paradigm of neuroscience is that perception is a form of intentional action and not a (passive) late stage of sensation. That brings him close to Merleau-Ponty (as he acknowledges) and distances his work from that of the stimulus-response determinist tradition.

My own positioning is closely aligned to that of Freeman. At the same time I do not deny the value of the relatively simple linear logic employed in the passivist tradition, regarding the latter as a special case or as a reductionist approximation to the reflexive activist-pragmatist view; sometimes it is useful to look at a very complex dynamical process in small parts by considering only a segment of the closed reflexive loop. Additionally, I do not believe it is at all helpful to assign to either sensation or perception any position of hierarchical primacy in the operation of mind/brain. I accept that perception is an endogenous action, one that wells up from within us and is directed outwards into the world. Yet I also believe that in order to initiate an intentional act the brain must contain within itself some structure or dynamical operation that is to do with the external world; it must, to a degree at least, be formally related, even isomorphic, to the world of which it constructs perceptions. It is difficult to see how the brain can, at a particular moment, project itself into the world without some encoded prior knowledge of that world; and such knowledge must have involved a past processing of sensation from the world. That encoding of worldly knowledge may not have arisen from the prior experience of the organism; it may be socially learned or genetically encoded, but genetic encoding is, in evolutionary terms, a heritage from ancestors that adapted to changing sensation from a changing external world, and survived as a result of felicitous but entirely random genetic mutations. It is implicit in Darwinian evolution that such changes were random and not the result of intentional acts such as perception, either by a "witting artificer" or the organism itself.

The question as to whether response to sensation or intentional action is the origin of our relation to the world (which includes our feelings of pleasure towards objects in the world) is, I suggest, not a very useful one. Perception as an endogenous activity

does not randomly well up from an inactive brain that is momentarily inattentive to all sensation. All the brain is always active and always receiving sensation from the external world as well as somatic sensation. A non-active neural pathway is a dead one and is quickly scavenged and replaced in a healthy brain. Though synaptic discharges between neurons may fall to a very low intensity and the frequency of their occurrence may diminish, the brain is never completely quiescent during the entire lifetime of the organism. There is always a background activity that involves both sensation and perception together in relational activity with each other. Perception does not suddenly pop up from a silent brain situation. It is no more useful to ask if perception is a response to sensation or vice versa than to enquire if the weather in New Cross is a response to the weather in Tunbridge Wells or the converse; or to enquire which town started the weather in the first place. The weather is a self-organising dynamical system, always both changing and persisting, which cannot be understood other than in reflexive and relational terms. In these respects the brain is very similar.

In the process of writing about how emotional behaviours, that is to say intentional actions of which we may or may not be aware, arise as a result of neurological action in our self-organising brains, I have begun to ask questions of a different type. I have become less interested in questions such as "which bit of the brain does what?" and "does A cause B or B cause A?" and more interested in the question "what is the relation of the organisational dynamics within our brain to the dynamics of the world outside us?" In thinking about emotions, I am thinking about how we act into the world in space and time, but I am also thinking about how that world projects itself into us, how it both sustains and constrains us. It seems to me that once again I am becoming preoccupied with the insistent paradox that characterises this thesis from its beginnings: the insistent Kantian paradox of the conflict between freedom and necessity. Unsurprisingly, I have not been able to resolve the paradox, yet in returning to it, in different forms, again and again, I have come to believe that there must be something in common between us and the world that exceeds the statement that we and the world are both made of the same stuff: star-dust. That is both a very romantic, poetic idea and good physics. But it does not offer much explanation of the relation between the world and us.

In the pauses between writing passages of this chapter I have imagined the scene of couples on a dance floor. A big crowd is having a lot of fun dancing a tango with great enthusiasm. This image has often recurred in periods of casual reflection and,

until now, I have pushed the image away and got on with writing about neuroscience. However, from my experience as a painter I know that the strategy of pushing away the visualisation of a new sort of image for a painting only works in the short term; eventually I just have to make that painting, whether it seems relevant to my practice or not, before I can move on.

Each couple launch themselves onto the dance floor as we perceptually launch ourselves into the world of sensation. Once on the floor the couples accommodate themselves to each other, to the other dancers, and to the music. Within seconds each couple is in harmony with each other, with the other couples and with the music; a self-organising structure, a society, a coherent spatio-temporal dynamic forms very quickly, and no one is in charge of this dance. The dance has its rules, there is a given tempo to the music, there are constraints on the dancers in terms of the steps they may perform and yet there is a great feeling of freedom too. The process is pleasurable for the participants and the onlookers; more precisely perhaps, the experience is one of joy. How does this all come about? Before the dance may come desire and after it contentment, but I suggest that the dance itself is not quite either of these, it is joy felt in relational action. The musicians, dancers and onlookers come together in the action of their response to the rhythm of the music. The dancers know that what they do is beautiful, not because of the perfection of their technique or that of the musicians but because the relational activity, the dynamic between them that they jointly perform, is itself beautiful.

I visualise the activity within our minds/brains, the interaction between our individual bodies and embodied minds and those of other people, and between the world and us, as being broadly isomorphic. That is to say I suggest that there is a great deal in common between the "music" of the dynamical actions of our brains and the "music" of the dynamics of the external world; and that it is this commonality of rhythm that enables us to dance in, and with, the world. Underlying all this activity is the motivating feeling of joy in participating in this relational process.

I suggest that the dynamical relations of intra-brain activity, inter-brain activity and the dynamics of the physical world must have much in common in terms of their self-organising structures and the relationships within and between these structures. This commonality is based in the fact that all three are largely self-organising dynamical structures that appear to operate on principles of reflexive and recursive relations, subject to certain restraints. In such systems the notion of autonomous entities lacks

relevance; what matters is the dynamics of the relations between entities, and these dynamics are not reducible to bottom up or top down processes but are a time persistent ensemble of circular relations of great complexity and richness of meanings. I believe that this ensemble of different brain dynamics, of different "dance tunes" with different beats and in major or minor keys constitutes our memories and meanings, our culture and our history, both at the individual and social levels. It is apparent in such systems that they are much more than an aggregate of discrete closed reflexive circular loops; loops often overlap in the sense that they share parts of their circuits with their immediate neighbours, thus insuring that the signals in one loop seep into the signals of another. In any local grouping of neurons that we lump together to categorise as an organ, none of constituents are truly autonomous but are interdependent parts of a community, which co-constructs its functional operations.

Concepts such as autonomy, discrete identity, necessity and linear causality appear to have much to do with a modernist moment in western culture and little to do with how brains work. This is not to suggest that the discursive practices of neuroscience are ideologically free from modernist influence. But it is to claim that their methodologies favour a post-modernist interpretation of how the brain works as a dynamical reflexive system. The view that science is inherently driven by modernist thinking was clearly appropriate in Kant's time and, to a lesser extent, in Greenberg's too. That view is no longer appropriate for a discipline that enthusiastically encompasses reflexivity and relation, ipseity and alterity.

In addition to these local regions the brain also functions as a whole in the sense that different global brain states regularly occur in which every part is involved. The signals of these global states operate at different frequency to the ongoing local activity and persist for only quite short periods of time. This macro activity usually lasts for a small fraction of a second only before changing to another global state. This unstable activity has an important role in limiting the duration of feelings of pleasure and displeasure. Its implications are discussed in the next chapter.

Returning now to the details of the role of emotion in the brain, it is reasonable to ask how it is that emotion, if it is generated in the limbic system as described in the positivist-pragmatic account given above, does not simply increase, run out of control and completely dominate our lives. Similarly, if emotion occurs in the amygdaloid nucleus (a small part of the limbic system), as claimed by the passivist stimulus-

response (cognitivist) theory, why does it not burgeon out of control too? The problem is, I suggest, particularly acute for the stimulus-response/cognitivist theory because of its winner takes all view of the operation of the thalamus in emotional initiation. The positivist-pragmatic model offers an explanation at both the local and global levels of how the brain is able to ensure that a specific emotion once initiated does not increase and persist indefinitely.

At the local level the explanation is primarily in terms of the space-time loop, which is at the core of the multitude of nested interconnecting loops of reflexive relation discussed above. The space-time loop represents the interaction between the hippocampus and the entorhinal cortex that lies immediately above it. Wilson & McNaughton (1993) have provided experimental evidence that the hippocampus is deeply involved in spatio-temporal behaviour. Both cognitivists and pragmatists accept that view, but the former believe that the hippocampus maintains a sort of cognitive spatio-temporal map and short term memory, whereas the latter believe that there is no map, no collection of facts or templates arranged sequentially in the hippocampus. Pragmatists believe that the neurons in the hippocampus maintain an ongoing field of synaptic discharges that are constantly modified by new spatio-temporal experience. They also claim that the field of synaptic activity is always changing as a result of its reflexive interactions with many other areas of the brain. That is to say that the pragmatist model is of a dynamic operator and not a static set of spatio-temporal memories.

An extremely important aspect of the behaviour of this dynamical operator is that it is inherently unstable over time. That is not to claim that the hippocampus or any the areas of brain that it interacts with are unstable; the relational field constituted by the signals between them is the locus of instability. Neither is it to claim that the instability is simply random, that any and all sorts of signal activity may arise. Freeman (1995) has provided EEG evidence that the locus of these instabilities lies within the core of the limbic system and that the instabilities are chaotic; that is to say they may be predicted according to the logic of chaos theory rather than random chance. Quite specific wave patterns recur in time and are limited in number. The dynamical interactions of the limbic system have preferred patterns of activity that are referred to as states. In a sense the limbic system has behavioural habits. As Freeman (1998 p9) writes,

> *In the language of dynamics the populations controlling the space-time loop construct and maintain an array of "attractors". What this means is that the*

limbic system has preferred patterns of activity. ... Each pattern is governed by an "attractor" with a "basin" of attraction, called that in analogy to a ball rolling to the bottom of the bowl to which it is "attracted". The basin is defined by the full range of conditions of the brain in which a pattern emerges. A collection of patterns is governed by an " attractor landscape", in analogy to a set of bowls, such that the limbic system can only be in one at a time, but it can jump from one bowl to another, hence from one attractor to another. Each jump is the occasion of an instability. That is, the brain is continually changing its state, because it is volatile and unstable".

A change of state within the limbic system is called a state transition and occurs between three and seven times a second. The state of a brain is a description of what it is doing in some specified time period (Freeman p143-172, 1999a). Interestingly, this frequency range is close to that of successive frames in a celluloid movie; it seems to be about the minimum frequency for humans to experience a sequence of discrete spatio-temporal representations as a continuous, seamless visual event. Moreover, this is a characteristic frequency of the EEG output from the hippocampus; this reinforces the view that the space-time loop (between the entorhinal cortex and the hippocampus) is crucial to the chaotic instabilities of limbic patterns that govern the flow of intentional action/emotion (see Appendix Three for schematic diagram of the dynamic architecture of the limbic system).

At this stage it is worth noting that stability in self-organising dynamical systems is relative to the time period of observation. Over a long period brains appear broadly stable; the concept of an enduring self, though arguably problematic, is ubiquitous. Over short periods of time, fractions of a second, brains appear very unstable. Paradoxically this short-term instability is needed to alter intentional action/emotional states thus allowing the possibility of there being a long term for us. The dynamical operations of the limbic system have been simplified in the above description to show its basic features. So far, I have only discussed, in simplified form, the operations of the limbic system, which is a localised area of the brain lying immediately above the brain stem. The operations of the system are crucial for the emergence of intentional behaviour patterns that are always spatio-temporal, for the perception-action cycle (Merleau-Ponty, 1962) in which action and perception are concomitantly continuous outcomes and preconditions for each other. The components of the limbic system provide the neural basis, at the microscopic level, for all brain activity. However, there is more to brain activity than the limbic system; there is in addition a

macroscopic dynamic behaviour pattern that plays a very important role, particularly in higher primates and humans: the neurohumoral system.

At the very top of the spinal cord, at the beginning of the bulb that is the brain stem, is an assembly of very specialised neurons called neuromodulators that occur in pairs and are embedded at the core of the brainstem. Their function is to secrete complex chemicals, which then rapidly permeate all areas of the brain. This system is found in all vertebrates. In humans about thirty different neuromodulator chemicals have already been identified and correlated with specific operational functions. Neuromodulators behave very differently to neurotransmitters; the latter operate at a very local level through exciting or inhibiting the intensity of the synaptic firings between neurons that are neighbours or near-neighbours. Neuromodulators, on the other hand, do not typically excite or inhibit local synaptic neuron connections; instead they enhance or diminish the effectiveness of synaptic pathways. They modulate the influence of the information transmitted around all the reflexive loops of the brain.

These paired brain stem neuromodulators receive their input from all parts of the brain but especially important is the input that they receive from the limbic system during the formation of intentional action; that is to say, they receive, as it emerges, primary emotional input from the limbic system. The output from the neuromodulators' axons is very widely branched out through the neuropil.[70] Their secretions act on both cerebral hemispheres ensuring that their effect is global rather than local. Freeman (p145, 1999b) claims that,

> *This functional architecture is a major determinant of the unity of intentionality, because the entire forebrain is simultaneously affected by the action of each pair of* (neuromodulator) *nuclei.*

In this passage, Freeman shows the importance of neuro-modulation for the macro activity of the frontal lobes (forebrain). Broadly, the frontal lobes elaborate and enrich

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[70] The neuropil is the substrate, the grey matter, throughout the brain in which neurons are embedded and grow. The last syllable of the word is derived, according to Freeman (p65, 1999b) from the Greek for "felt"; thus referring to feelings. For me, however, the word felt has immediate connotations with the work of Joseph Beuys; it brings to mind his preoccupation with felt as textile: a word itself derived from the Latin for a spider's web.

These associations lead me to imagine the neuropil as a porous web that encompasses the whole brain. The neuropil may therefore be imagined as a grey felt in which all the neurons in the brain are embedded. The neuromodulators saturate this felt with a particular chemical. From time to time, the felt is wrung out and re-saturated with a different chemical. In a real sense the chemically saturated neuropil provides an emotional con*text* in which the higher brain operates.

the predictions of the possible outcomes that may be expected to arise from intentional actions that emerge in the limbic system. They play an important role in perception. More particularly they play a very important role in a segment of the perceptual cycle known as preaffference, which is the order parameter,[71] (broadly, the restraint on the patterns of neuron firings), that shapes the attractor landscape discussed earlier, in such a way as to facilitate the maximum capture of sensation relevant to the expected outcome, relative to what the brain is attending to at any particular moment.

The link between brain stem neuromodulators and the forebrain frontal lobes is significant for this thesis. A brief outline of the function of the frontal lobes is appropriate to explain why that is so. Most animals have a very small forebrain or none at all. Compared to even the higher primates, humans have an enormous forebrain, which is almost as large again as the entire brain of higher primates. The human forebrain affords us an excess of operational functions over the basic autonomic and goal-directed intentionality provided by the limbic and cortical elements of the evolutionarily older brain, which we have in common with primate animals. The frontal lobes of humans are not simply bolt-on additions like extra gigabytes of memory for a computer that allow us to do more of the same faster. They are qualitatively distinct in their operational dynamics and because they are involved in reflexive interdependency with our limbic system and the rest of our primitive brain these elements have developed to be significantly different from the corresponding elements of primate brains; the evolution of our very large frontal lobes has, to a degree, changed the entire system.

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[71] See Freeman (1999b, p114-115). The notion of order parameter is important in understanding the distinction between noise and chaos in the firing patterns of neurons. Looked at on the micro level the individual neurons in all areas of the brain (not just the brain bulb neuromodulators that we are considering here) appear to behave autonomously and to fire randomly, lacking any spatio-temporal pattern, such as a wave form, in their synaptic output. The output of a single neuron does not appear to be synchronised in any way with its immediate neighbours; it appears to behave autonomously. But when a large assembly of neurons is examined mesoscopically or macroscopically (by an EEG or MEG scan for example) it is apparent that interaction of large numbers of neurons together has biased the background noise towards an oscillatory signal; the uncorrelated action potentials of individual neurons, in their group interactions has made this oscillatory bias possible; noise has become chaos and chaos has a formal oscillatory structure that persists for a short period of time all over the brain. It is the constraint that the individually autonomous neurons exert on each other in the group that produces the *order parameter* that limits their autonomy as an ensemble. This limiting of autonomy is what physicists refer to as a reduction of the number of *degrees of freedom* in a system that involves coupled particle-particle interactions. An important difference between random noise and chaos is, as Freeman points out, that random noise activity at the micro level persists in time, whereas chaotic activity at the meso or macro level, because it is a constraint, can be switched on or off like a light switch. The order parameter is thus important in understanding the establishment and curtailment of meso and macro activity that is ordered, albeit chaotically, throughout the brain yet is carried by random autonomous activity of the individual neurons.

Neuroscientists broadly distinguish between the functions of the parts of the frontal lobes in the human brain as follows. The dorsal and lateral areas are involved in cognitive functions such as logic, reasoning, and prediction, and the medial and ventral areas are involved with social skills and the capacity for empathy. Freeman (1999b, p143) summarises these contributions as foresight and insight. The distinction between the functional specificities of the local domains (or patches in the jargon) in the fore-brain is only approximate because many such areas in all parts of the brain are always interdependently involved in the processes of reasoning, memory, moral evaluation etc. that collectively constitute both our personal and social history and culture. The broad distinction outlined above is useful, however, because neuroscientists often talk about dorsal or ventral "flows" to indicate the broad category of brain function to which they refer. It is important, nevertheless, to bear in mind that these local domains or patches though distinguishable are not distinct; none of them is wholly autonomous. Both dorsal and ventral processing is involved in complex human behaviour such as constructing meaning, learning and un-learning, the notion of self and consciousness. Freeman suggests that such sophisticated mental activities in humans are possible only through "global" co-operation that is mediated by the many patches that interact together via amplitude modulated transmission patterns at a frequency of around 40 Hertz; there is a very large body of experimental evidence that such wave patterns correlate to the sophisticated observed behaviours outlined above. This global activity occurs within and between both hemispheres and many authorities have proposed that this macro-level activity in the brain underlies the unity of perception and action and therefore is crucially involved in the concept of self. Freeman (p148, 1999b) writes that,

> *I propose that every neuron and every patch* (throughout the entire brain) *participates in every experience and behaviour; even if its contribution is to silence its pulse train or to stay dark in a brain image. What is important is the small fraction of semi-autonomous activity in every part that is co-ordinated, not the small fraction of neurons or patches that is more active than the other.*

I agree with this proposition. In any signal or logic circuit an off switch is every bit as important as an on switch. Also, I am happy that Freeman privileges the importance of a small fraction of semi-autonomous activity of all the parts of the brain over the winner takes all aspect of the stimulus-response/cognitivist theory, with what I see as its overly deterministic connotations. The emphasis on the semi-autonomous implies a recognition of the importance of a heteronomous moment that is involved in all

brain activity, without which any description is in danger of collapsing back into a modernist narrative about (Kantian) autonomous categories.

As I approach the end of this chapter I want to summarise some of the matters discussed in it that are of particular relevance to the next chapter. Firstly, I want to draw attention to Freeman's claim that all actions are emotional (Freeman, 1998, Introduction). This claim, in one form or another, recurs in all his work. It applies both to all spatio-temporal actions whether in relation to objects momentarily present in sensation or to objects of the imagination. The claim derives from relating emotion to homeostasis. As Freeman (1999b p124) writes,

> *I will settle for describing emotions from the perspective of their relation to the biology of intentionality, not as powers in the physical sense, but as manifestations of brain dynamics.*

As outlined in this chapter, intentionality and hence emotion arises in the limbic system of the brain. Both the stimulus-response/passivist and activist/pragmatist models of brain function agree on this, though they differ significantly on the dynamics of the process and of the processes that follow it. The passivist theory does not have a great deal to say about higher brain/frontal lobe operations that are not limited to cognition. The activist/pragmatist model is one of the dynamics of a self–organising, chaotic system that is unstable in the short term. This model traces that part of the emotionally mediated output from the limbic system that flows ventrally to the top of the brain stem from whence it is transferred upwards by the neuromodulator paired cells to the medial/ventral and lateral/dorsal areas of both hemispheres of the forebrain. These areas, as already mentioned, are deeply involved in the formation of cultural, social and moral concepts and in the processes that we call reason, memory, and learning, all of which are indispensable to our estimation of beauty.

The very important point that I wish to make here is that the perceptual information flow on which reason (both pure and practical in the Kantian sense) operates is already and always emotionally qualified. In an important sense therefore, reason depends for its operations on the intentionality of a person through that person's emotions that include their feelings, which may or may not be in full awareness. Reason is not, therefore, emotionally neutral; and neither is emotion entirely irrational because a part of the rationally mediated output from the frontal lobes flows back down to the limbic system. But emotions and feelings, in the broad sense, are either to do with approach behaviour/pleasure or aversive behaviour/displeasure.

Therefore the possibility presents itself of situating beauty, a predication of pleasure on an object of sensation, as a qualifier of reason, as a sort of prior emotional vectoring of the general direction which reason is to take. Similarly, both the absence of pleasure and feelings of displeasure also qualify the process of reasoning. If beauty as a feeling of pleasure is the spur to, and the mediator of, the intentional action of reasoning, and reason is an explanation of an intentional action that is contemplated, anticipated or has already taken place, then I suggest that there is a strong link between beauty and reason through the crucial biological concept of intentionality. In this way aesthetics come to occupy a central role in the operation of reason and the power and importance of beauty to rationality is recognised. In all of this, I am not claiming that beauty is the cause of reason because I am arguing from within a paradigm that does not recognise, and is not reducible to, the notion of linear teleological causality. But I am arguing that recognition of the motivating, dynamical role of beauty, or its absence, within the self-organising brain system is appropriate. Beauty, I claim, either as presence or absence, is crucially involved in perception, reasoning, and learning and thus in all cultural, social, and moral activity. Beauty is a precondition, quite literally, for "being in the loop" of all these activities; simply because it is a vital part of the reflexive feedback circuits in which all these activities are involved. Without beauty or its opposite, there is no motivation to actions, either physical or mental, that relate to the objects of perception; there is nothing to fire up resting neural pathways into excitation.

The difficulties, discussed in the previous chapter, of reconciling Kantian pure reason, practical reason and the judgement of taste begin to dissolve; because beauty provides the heteronomous moment to pure and practical reason (previously considered as autonomous from each other and from beauty) that is indispensable to any attempt to unite them. No doubt there are technical difficulties of a philosophical nature in such a resolution, but I claim that it must be possible in principle simply because we have moved to a reflexive notion of brain and the nature of mind that depends on the dynamics of reflexive relations. In such a relational system, the concept of autonomy is irrelevant, and it was autonomy that was at the heart of Kant's difficulties in uniting his critical trilogy. There is no need for a supersensible substrate once strict autonomy is relinquished; we can make do with a reflexive dynamical sensible one that is the brain.

In looking forward to the next chapter, the second aspect of brain dynamics that I want to discuss is that of learning and unlearning because I believe it to be very

relevant to beauty in art. In this chapter, all the arguments ultimately derive from the biological concept of homeostasis: how organisms act in such a way as to optimise the conditions of their internal milieu to survive in the changing conditions of the external world, through intentional actions that are (e)motivated to achieve that end. It is not immediately apparent how the production, circulation and reception of art may be accommodated within a homeostatic narrative. Art is not, prima-facie, necessary for biological survival. How is it, then, that feelings of pleasure/displeasure, indispensable for survival in our relation to nature, are also experienced in our relation to objects that have no apparent utility for survival?

The explanation suggested in the next chapter is that although we cannot change our emotional experience we can change the objects on which we predicate it. The proposition is that the embodied visceral, cardio-vascular, epidermal, postural, respiratory and other internal bodily changes which we become aware of and call feelings are pretty much fixed for all animals, including humans. We can, however, learn to attribute these feelings to objects and intentional actions in relation to objects, in a way that cannot easily be explained as resulting directly from evolutionary development. This capacity of learning to re-attribute emotional responses to objects that were not previously emotionally competent stimuli has been observed, to a degree, in all vertebrates, and is especially developed in humans. Our ability to do this is important for this thesis because this is a thesis about visual art and our emotional response to art, not to nature. In the next chapter I shall discuss narratives about how we re-predicate our emotional responses to natural objects, developed in evolution for survival and well being, onto art objects.

In the next chapter I investigate the neurological correlate to the Kantian distinction between the judgement of taste and desire. Traditionally, (in the last twenty years or so) neuroscience has not distinguished between feelings of pleasure and desire; they have both been interpreted in terms of dopamine produced by neuromodulators in a specific area of the limbic system/brain bulb. At the time of writing this view is being revisited by neuroscientists. I shall return to this topic in the next chapter because of its potentially significant implications for Kantian aesthetics.

Lastly, I have become interested in the instabilities in various dynamical systems within the self-organising brain, discussed briefly towards the end of this chapter. This interest is related to my growing belief that the dynamical operations of the brain and the dynamical operations of the external world must be very similar for the

possibility of interaction between both in activities such as perception and intentional action. My interest is not in the correlation between internal and external "stuff" that is spatially defined, but in the similarity between the spatio-temporal system dynamics of brain and world. This interests me because it may have some relevance to the reflective Kantian judgement in aesthetics. What I am hinting at is that a certain instability in our perception of art - and in its reception and production - may need to be afforded to us by the specificities of the art object in order for us to respond emotionally, and by implication to respond aesthetically, to it. The prolonged play between concept and imagination, the deferment of reduction to a determinate concept of the artwork, that is characteristic of the Kantian reflective aesthetic judgement, may, I suggest, find its correlate in the instabilities of the transitory global brain states discussed earlier. Ambiguity, instability of meaning, is characteristic of art and of the brain's operational dynamics too.

CHAPTER FIVE

AFFECTIVE NEUROSCIENCE AND BEAUTY AS EMBODIED PLEASURE

Feelings and their role in perception: passive model

In this chapter I discuss the nature of beauty within the biological context of neuroscience. The Kantian account of beauty, discussed in Chapter Three, moves the discussion of beauty on from the pre-critical accounts of beauty that are grounded in either the idea of perfection or of sense; the wholly subjective or entirely objective notions of beauty are, to a degree, subsumed in Kant's treatment of beauty. I suggest that, in broad terms, the narrative of beauty offered by neuroscience is compatible with Kant's theory of beauty and his reflective judgement of taste. However, I believe that there are some important differences between the Kantian and the neuro-biological accounts of beauty and these disagreements and similarities are discussed in both this and the next chapter. In this chapter I use the pragmatism[72] of science to critique and limit the Kantian theory of beauty, which is ultimately based in logical entailment from philosophical propositions. My methodology here is, I claim, a contemporary re-interpretation of the Kantian practice of using the experience and the scientific knowledge then available to critique and thus limit the speculations (as he saw them) of metaphysics. An example of such Kantian methodology is his epistemic reversal, discussed in Chapter Two of this thesis, which is modelled on the Copernican revolution in cosmology, and is fundamental to the critical methodology[73] that is so crucial to his project.

For now, I want to apply the basic ideas of neuroscience to a discussion of beauty in nature and then to beauty in art. As we have seen in the last chapter, neuroscience may be roughly divided into the activist-pragmatist and the cognitivist-passive approaches to theories of mind/brain. Yet both schools of thought share the view that feelings and emotions are, quite literally, of vital importance to the survival of an organism. In this respect the role of feelings of pleasure or displeasure are even more important to neuroscience than to Kant.

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[72] The word is used here in its general sense rather than simply to distinguish between the positivist-pragmatist and cognitive-passivist theories of neuroscience.

[73] Kant's critical methodology may be obtained without any appeal to the transcendental subject simply because it is methodologically derived "*as if*" it were so in his First Critique and makes no ontological claim. See Chapter One.

The concept of homeostasis, discussed in the previous chapter, is a central premise of contemporary theories that seek to correlate the activities of mind with those of brain in its relation to the rest of the body. For an organism to survive it must assimilate itself to the world in which it lives. It must maintain its internal milieu in a condition that keeps it alive and healthy. Both the internal milieu and the external world change over time and homeostasis is about adjusting the relation between both in such a way that the internal biological state is kept within tight parameters that delineate the boundary between life and death. To achieve that the organism needs to both engage with, and constantly perform survival-appropriate actions in, the external world. Neuroscience holds that emotion is the basis of all such intentional actions. We may or may not be aware of our emotions but in either case they are immediately on public display for others to recognise, as discussed in the previous chapter. When we emote we alter the internal state of our bodies in readiness for specific actions. When we perceive these internal changes in our bodies, and when we perceive the relation between these internal changes and events in the external world, we have feelings that are pleasurable or displeasurable.

Antonio Damasio (2003b) in an interview published in the New Scientist magazine (8/11/2003) summarises this process in the quotation given below. Because the quotation is a long one I have taken it in parts that are followed by my comments on it.

> *I too[74] believe that continuous signals from the body to the brain provide a continuous backdrop for the mind. In fact, I doubt that we could be conscious in the usual sense of the term if we did not have a backdrop. Body signalling is also the essential substrate for feelings. When we have an emotion we alter the state of the body in a variety of ways, and then we register the resulting changes in the brain's body maps and feel the emotions. Emotions come first, feelings second.*

Damasio's positioning, as discussed previously, is broadly within the passivist cognitivist approach to perception. I suggest that in this part of the quotation Damasio is assigning a somewhat passive role to the brain in its relation to the body; the "origin" of feelings, is exterior to the brain. The body signals reaching the brain may come from the exterior world via the senses or be somatic information from organs, muscles etc. within the body. In either case they are not described here in

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[74] Damasio is linking his own ideas to those of William James and Spinoza in this article.

terms that refer to a brain that initiates the process of perception. Damasio links emotion, via body signalling, to both consciousness and feelings and states that emotion alters the state of the body, which is subsequently "registered" in the brain's body "maps" and experienced as feeling.

I acknowledge that a great deal of experimental evidence, accumulated over many years, supports the cognitivist view. I also believe that emotion is crucially important to the experiences that we refer to as the self, consciousness, and feelings. Yet I have reservations about the cognitivist model because it fails to emphasise the reflexive, or even the reflective, nature of perception and the non-linearity of "causal"[75] relations in the brain. The cognitivist model also underplays the influence that reason has on the later stages of developing states of emotion/feeling as well as the influence of emotion on the operations of reason.

The terms "register" and "map" have, for me, modernist associations; I imagine a 19th century cartographer recording new information on an old map in a vast library of maps. The map is then put away in the correct location and the cartographer does something else. My objection to this account is that it is expressed in what I see as broadly Cartesian terms. The information about the state of the body is not present to the cartographer unless he is looking at the map. A more contemporary analogy is of computer documents or files that are not present to the user unless commands are given to the central processor unit to retrieve them. The problem remains of whom or what gives these commands and the cognitivist model assigns this role to sensation from outside the passive receptor brain rather than to an active searching brain as conceived by the positivist pragmatist model. I return to this problem and critique, from a positivist-pragmatist position, the very strong emphasis that cognitivists assign to the role of sensation in perception, at the end of this discussion of Damasio's claims.

The positivist theory holds that what the brain remembers is meaning rather than sensation, and that this meaning is always present and is constructed by the dynamical relations within the brain and between the brain, the body and the world. At the neurological level positivists believe that incoming information results from the active searching by the brain for specific information. When the information is found

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[75] I have placed the word causal in inverted commas because the notion of causality as logical entailment between antecedent and consequent events becomes increasingly problematic as the number of interactive elements of a complex self-organising system increases; and the brain is a very complex system involving an extremely large number of neurons and neuronal pathways in various possible combinations.

it is synthesised with the always-present electro-chemical wave patterns in the immense number of neural connections in the brain that influence, and so modify, the patterns that existed a few milliseconds earlier. As I have discussed in detail in the previous chapter, the circularity, and especially the reflexivity, of the process ensures that the entire brain is involved in the construction of meaning; no part is wholly autonomous from another.

There is therefore, no central processing, no command unit or homunculus within the brain because it operates as a self-organising entity in a way that is somewhat similar to our global weather system. Nothing is ever static. Nothing can be stored and retrieved unchanged at a later date. I do not want to repeat details of the dynamical operations of the self-organising brain here, but I do want to emphasise that the positivist theory of brain - and of mind - is primarily in terms of the relation between brains and bodies, brains and other brains, and brains and objects. The positivist approach (that is reflexive in its form) to the interaction between brain, body and world via emotion is somewhat analogous to an ongoing conversation between participants in a seminar; the differing meanings that individuals take away from the discussion are not reducible to the origin of a particular participant.

Returning now to the next part of the quotation from Damasio cited above, in which he goes on to claim that,

> *My view is that the substance of feelings, the heart of feelings, is really a perception of what has changed in our organism, in our bodies, during an emotion. Emotions are unleamed responses to certain classes of stimuli. We are equipped to have emotions, thanks to evolution. When we emote we alter the state of the organism in a rather profound manner – the internal milieu, the viscera, the musculature – and we behave in a particular way. The collection of these changes is the emotion... Feelings are the perception of these changes together with the perception of the object or situation that gave rise to the emotion in the first place.*

Damasio states here that emotions are unlearned responses to certain classes of stimuli and are the result of evolutionary changes. The context in which he writes is that of a short article in a scientific journal, and it would be unfair to take this statement as his considered position. In other texts, he states that emotional responses may, and indeed more often than not are, learned from culture and history. For example, Damasio (p53, 2003a) writes in the following passage,

> *The brain is prepared by evolution to respond to certain ECSs* (emotionally competent stimuli) *with specific repertoires of action. However, the list of ECSs is not confined to those prescribed by evolution. It includes many others learned in a lifetime of experience.*

Damasio's view is that the physical changes within the body such as respiration, heartbeat, changes in the viscera and musculature, hormonal changes etc., are qualitatively the same for any particular class of emotion, though they may vary widely as to the magnitude of change depending on the particular ECS experienced. We are capable of modulating our emotional responses according to the context in which our response to the ECS occurs, but not of altering, except as to degree, what is changing inside our bodies and the nature of feelings that result.

I broadly agree with that view, though when Damasio refers to the context in which our emotional response change, I suspect that he is, in common with other cognitivists, referring to changes in sensational context. That is fair enough, but it ignores the importance of the intentional changes within us that have resulted from our own changing personal and cultural histories. Following Freeman (1999, ch4), I claim that although a particular ECS may remain constant over a period of time, our response to it will change over that same period of time because the meanings that we make will have changed as a result of our constantly and rapidly changing intents. Thus, we constantly qualify our response to exposure to the <u>same</u> stimulus that is repeated over time. These response changes may be observed at the neurological level (Freeman. 1999, ch. 4) as changes in the pattern of synaptic discharges within our brains. These changes may be small and the overall pattern remains recognisably that of a particular experimental subject over time, but the changes are clearly discernible. These changes demonstrate how our wider history of experience within a particular time period mediates our response to exactly the same stimulus presented to us at the beginning and end of the time period. Such changes are cumulative over successive exposures to the same stimulus and are important in the process of learning.

Damasio goes on to claim that the brain is capable of behaving "*as if*" actual changes in the body had occurred through the process of imagination. The brain, he claims, can alter its "body map" state very rapidly and directly by "bypassing the whole body altogether" through operations that he suggests take place in the pre-frontal cortex or the amygdala. At first sight this claim of Damasio, proposed in the early 1990s looks

promising because it seems to attribute some agency to the brain in initiating emotive states and hence feelings; it appears to be a shift away from the passively responsive brain and towards the positivist active brain. The use of the term "as if" (emphasised in this way by Damasio) is encouraging for Kant enthusiasts because it resonates with Kant's often used critical methodology. In more recent publications, such as the one quoted above, Damasio (2003b) demurs from these earlier "as if" claims, stating that "they may, to a certain extent, falsify what is really going on in the organism". His considered position seems to be that changes in the body generated by response to sensation are the basic cause of changes in the "body maps" of the mind which, in turn are indispensable to our having feelings at all.

However, Damasio (2003b p50), is very clear about the intimate relation between cognition and emotion when he states,

> *We don't separate emotion from cognition like layers of a cake. Emotion is in the loop of reason all the time.*

When Damasio uses the term reason he usually means theoretical reason, particularly cognition, rather than practical reason. He immediately goes on to write,

> *We have inherited an incredibly complex emotional apparatus that, in evolution, was tied to certain classes of objects and situations that were fairly narrow – things that were threatening, that could cause anger or trigger compassion, shame or embarrassment. But now we have added to that repertoire of emotional triggers many other objects and situations we have learned in our lives, so we have the possibility of responding emotively to all sorts of situations.*
>
> Damasio 2003b, p50

Later in the same article, Damasio describes as ridiculous the claim that our decisions are determined by our emotions. He justifies this opinion on the grounds that, even though our emotions come to us through evolutionary and genetic means, the way that we have cultivated our relations with the world "depends entirely" on how we have been educated, on our family ideals and our the social environment. Although I support Damasio's claim that our lives are not determined by emotions, I do not see any need to go to the other extreme and claim that the way we live is only dependent on learning and other socio/historical/cultural factors. Without an explanation of learning, social, cultural and historical factors that takes at least some account of the specificities of our embodiment (that Damasio does not supply) the implication is that aspects of our nature such as genetic inheritance and sexual anatomy (as distinguishable from gender) are of no importance in our lives. I do not

believe that an explanation of the role of emotion is well served by situating the discussion in what amounts to a Cartesian dichotomy between nature and nurture.

My principal objection to Damasio's analysis is that, although it (usefully) links emotion and feeling to cognition (a link to necessity in Kantian terms) it does little in providing an explanation, in terms of affective neuroscience, of how emotion is linked to the freedom (a link to Kantian morality) which, I claim, both makes a society and culture – that is based on more than individual self-interest - possible for us. Such a society, in turn, attempts to foster and protect freedom through its institutions and laws. What is needed is a narrative of how emotion and feelings are involved in, and supportive of, social and cultural life. A neurological narrative of how emotions, and hence feelings, foster the production, reception and circulation of consensual moral values is part of the project of this thesis.

The relationship between emotion and feelings on the one hand, and reason, both theoretical and practical, on the other is important. There is a significant difference between Damasio's positioning and my own stance in respect to this relationship. Damasio's apparent anxiety is to defend emotion from the ancient stoic and the Platonic tradition in western philosophy, which perceives emotion and pleasure as threats to reason. The fear, in that tradition, is that corporeal desire, the lower and non-legislative Kantian faculty of desire,[76] will determine our actions and often, if not always, take precedence over the claims of reason on us. Broadly, the Platonic tradition regards actions that conform to social norms and are beneficial to others as rational and designates as emotional those that are detrimental to social order. Though I recognise that there is an important difference between these two sorts of action, I would claim that both are emotional and intentional. The basis for that claim was discussed in Chapter Four and is, briefly, that all intentional action is initiated and emotionally qualified by the limbic system[77] within the brain. The claim, within the Platonic tradition, is that emotion is rendered safe by its situatedness within the constraints of an educated and cultured society.

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[76] The "higher" and legislative faculty of Kantian desire being pure desire in the exercise of freedom through the principles of morality achieved via practical reason.

[77] The substantial body of clinical evidence that supports (though I do not claim that it proves) this claim is that subjects with severe damage to the limbic system, particularly to the amygdala, are not only incapable of emotions and feelings, but are also incapable of making decisions to act. In contrast, subjects with severe damage to those areas of the brain such as the frontal and pre-frontal cortices (thought to be correlated to rational action) have no problem at all with taking action, but their decisions are often considered to be bizarre and socially/morally inappropriate. See Damasio A, (2000, p62-67) and (2003, p137-152).

I believe that part of the problem here is the conflation of emotion with desire. As discussed in Chapter Four, the positivist-pragmatic branch of neuroscience sees emotion in terms of intentional action that is defined and chosen by the agent of the action. Emotion, in this model, begins within the dynamics of neural activity in the brain – and it qualifies and is itself qualified by, every part of the brain, including the rational parts; it is the first step in all goal-directed activity (Freeman, 1999, ch. 1 and 6). Emotion is not so much a passive response to sensation, but the basis of an active search for sense information that is relevant to a pre-formed intentionality to take action in accordance with our own growth, maturation and well-being. As we have already seen, it is not the same as motive: the reason and explanation for an action. Neither is it the same as desire: the awareness and experience that may stem from an action (Freeman, 1999, ch1, p10).

My own position in this discussion differs from that of Damasio in that I do not regard emotion as a threat to reason but as a condition precedent for it. Similarly, I do not regard feelings of pleasure or displeasure as threatening rationality but as indispensable to all action including mental acts, because I subscribe to the claim, elaborated later in this chapter, that pleasure is the common currency of the trade-offs that we make between conflicting motivations. That is not to claim that maximising pleasure inevitably and always results in moral and socially beneficial action. Such a result derives, I suggest, from inadequate education in what Kant refers to as moral ideas and moral feeling, rather than from pleasure itself.

I do not want to put forward my own position as a mirrored reversal of Damasio's claim by suggesting that education, culture and society depend entirely on emotional responses to stimuli that have evolved and become genetically embodied in us. Neither do I claim that emotion determines how we relate to the world in a way that is apart from reason (pure or practical), culture, and history. I do, however want to assign a central and supportive role to emotion and feeling in the way that we construct social values, including moral and aesthetic judgements, as well as cognitive judgements.

Although I suggest that the cognitivist view goes too far by claiming that the way that we live in relation to the world depends entirely on social, historical and educational factors, and positions these influences as oppositional to the embodied emotions that have come to us through evolutionary and genetic means, I welcome the cognitivist recognition of the importance of culture and history. I also support the cognitivist

view that basic emotional responses, together with feelings of pleasure or displeasure, may be re-predicated onto stimuli that apparently have nothing to do with the stimuli to which they are thought to have originally referred. Without that process, learning and art would hardly be possible. Yet I believe that the distinction between emotional responses that have been evolved and those that have been learned is not very useful and is at the root of the sterile debate that picks over old arguments about the relative importance of nature and nurture.

For these reasons I prefer to continue my enquiry in the context of the positivist-pragmatist model of neuroscience. This is not a move that is designed to refute or replace the cognitivist view because I believe that the positivist view encompasses, in its generality, the best of the cognitivist model as a sort of reduced form or special case. In this respect my attitude to cognitivism is analogically broadly similar to Kant's willingness, discussed previously, to accept everyday empirical attitudes provided there is recognition of their ultimate contingency on transcendental idealism.

Active perception: the temporality of beauty as pleasure

The positivist pragmatist approach to our emotional response to stimuli and the feelings we experience in perception differs significantly from the cognitivist approach exemplified by Damasio. Freeman (1999, Ch 1, p21-35) claims that sensation from the body or objects in the world is not stored in the brain,

> *Meanings form in our brains. We make representations and use them to induce the formation of meanings in others. Most people think that we attach meaning to representations (words, gestures, symbols and images) as carriers of meaning. Materialists and cognitivists also think that brains make representations inside themselves of the outside world and use these to store memories in the same way as computers, but they do not know how meanings are attached to their representations in either computers or brains. As a dynamicist and pragmatist, I propose that representations exist only in the world and have no meanings, and that meanings exist only in brains without being represented there.*

A little later, Freeman, in discussing the notion of perception developed by Thomas Aquinas and its relevance to contemporary neuroscience, writes that,

> *Aquinas concluded from his conception of the unity of the self that the process* (of perception) *is unidirectional. Actions of the body exit by the motor*

systems, changing the world and changing the relation of self to the world. The sensory consequences of the actions then enable the body to change itself in accordance with the nature of the world. However, the perception is only of the altered contours of the self inside (my underlining). *No forms are pushed through or across the boundary. The key word he* (Aquinas) *used is "assimilation".* [78] *The body does not absorb stimuli, but changes its own form to become similar to aspects of stimuli that are relevant to the intent that emerged from within the brain.*

(Freeman, 1999, p36-37)

My interest in this reflexive dynamic of intent, action and perception, in which subject and object are brought into relation with each other and in which each changes and is also changed by the other, is two-fold.

Firstly, it is apparent that form plays a crucial role in the process. Moreover the form described above is not static but is dynamic. Such form is neither opposed to nor wholly independent of matter. Rather it is, in the positivist-pragmatist model of perception, a description of dynamical relation between the non-discrete material entities that we designate as brain, body and the world. This new type of form is reflexive and recursive; the brain plays an active and endogenous role in perception, but it makes no sense to identify the brain, the body or the world for us as the origin of this form because it is the dynamical relation between all these that is indispensable to such a co-relational form.

In my practice I now try to make paintings that elicit this type of relation between the painted object and the viewer. The viewers see the image as spatially flat, as two-dimensional, or as recessive three-dimensional or in terms of intrusive three-dimensional space. The viewers are thus brought into awareness that neither themselves not the painting alone is the source of this changing spatial experience, but that it is given in the perceptual relation between themselves and the image. As a painter, I want to bring the image and the viewer together in a relation that is pleasurable.

Secondly, form and beauty are intimately connected in the Kantian aesthetic, because, as discussed in Chapter Three, the Kantian notion of beauty is couched in formal terms. Similarly his aesthetic judgement differs from cognitive (but not from

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[78] Aquinas uses the Latin "adaequatio" meaning a movement or tendency towards equality that does not arrive at identity with that towards which it is directed.

moral) judgements because of its form that is apart from concept and objective interest and is universally communicable. Kant could only satisfy these conditions, and could only link together the aesthetical and moral judgements, through a notion of beauty that is a formal one.

In the light of all these considerations, I claim that what proximately drives the process of perception is the anticipation of pleasure or displeasure, that is to say, the joyful anticipation of beauty or the painful anticipation of its lack. I suggest that we experience beauty or its opposite in the process (that is to say *as* process) of altering our own form – as Freeman puts it, in changing the contours of the self – in our relation to external stimuli that are relevant to our momentary and changing intents.

There are two important points that I want to mention here. Firstly, I have qualified my claim that beauty or its opposite drives perception by the word "proximate". I have done so to distinguish it (though not to claim that it is wholly distinct) from the "ultimate" nature of the role of beauty as a means to survival and well-being, as a response to the physiological needs described by the term homeostasis. I am quite prepared to accept that pleasure and displeasure may well have evolved in organisms many thousands or even millions of years ago as mechanisms to do with homeostasis. There is a good deal of evidence to suggest that the pleasure/displeasure response occurred very early in the evolution of simple organisms. Explanations based on such early homeostatic developments may not be particularly helpful in directly explaining how it is that we take pleasure in activities that are not apparently related to, or explicable in terms of, physiology and homeostasis; an example of such activity might be going to look at paintings in art galleries.

What I have in mind here is that pleasure may, in addition to its homeostatic role, have achieved something that might be described as a life of its own, that is neither directly related (nor totally unrelated) to purely homeostatic and physiological needs. The sort of thing that I have in mind is pleasure that has become partially dirempted from its original evolutionary referent. As a result of such a separation, the proximate considerations and choices that we make between alternative pleasures and between pleasures and displeasures that may result from various possible actions become no less important than considerations of the ultimate homeostatic origins and implications of our choices. What I am suggesting here is that the feeling self, in its quotidian relation with sensation from the external world, does not pay much

attention to the ultimate origin of its emotional responses. It does not much "care" if its emotional responses and feelings are instantial of natural evolution or cultural learning. By analogy, I am suggesting that in deciding between alternative emotional responses as actions we merely shop around for the best pleasure/least displeasure bargain and do not pay much attention to how we obtained our means, our money, to make a purchase. My interest in making this claim here is to subsume the distinction between evolved and learned responses because the available evidence, discussed below, is that both types of response are very similar in how, and with what intensity, they operate. However, the economic model of emotional action has much wider implications and I return to a discussion of them later in this chapter.

This leads me to my second point, which is that pleasure and beauty are not absolutes but are relative to context and are transient. For example, as reported by Cabanac et al. (1972), hypothermic subjects will report pleasure when stimulated with moderate heat, and displeasure with cold. A hyperthermic subject gives the opposite reports. It is not the stimulus that elicits pleasure or displeasure but the relation between the stimulus and the internal condition of the subject. As soon as either the hypothermic or the hyperthermic subject returns to a state of normothermia (that is experimentally discerned by measuring their deep body temperature, rather than relying only on verbal reports or behaviour) all subjects become indifferent to moderate hot or cold stimuli. Pleasure is only observable, and is only reported by subjects, in the transient state in which the stimulus helps the subject to return to normothermia, i.e. to their internal set point of comfort in relation to internal temperature.

Very similar results are observed in relation to taste, the term used here in the sense of pleasure or displeasure reported in the experience of ingesting food. Subjects provided with food of a given flavour will report it as pleasurable when hungry and describe it as unpleasant or report indifference to it when they are in a condition of satiety. Measurement of subjective behaviour, in terms of the amount of food eaten, confirms the relationship between behaviour and pleasure. This experiment reveals an interesting difference between contemporary scientific thinking and Kantian thought. The scientific interpretation is that the affective quality of the food consumed depends on quantity eaten in the very recent past. This introduces a temporal aspect to the idea of quality and contests the Kantian absolute autonomy between two of his four categories. Science today is not much interested in

autonomous categories or in an absolute distinction between subject and object as discrete entities.

I find a particular aspect of these experimental reports especially interesting: the indifference of the subjects' response to mild pleasure/displeasure stimuli once homeostasis has been achieved. Paradoxically, it seems that as the optimum homeostatic condition is approached the pleasure experienced reduces to zero, that pleasure results in a state of indifference to the stimuli that a few moments earlier were pleasurable. I am left wondering quite what this indifference is. Is it contentment or is it boredom? Neither concept seems entirely appropriate; the former has mild connotations with pleasure and the latter with displeasure. It occurs to me that what might be happening here is that when pleasure reduces to zero, it immediately changes its sign from positive to negative and becomes displeasure that gradually increases with time. Perhaps the neurological correlate of this effect is a global state instability in the brain as discussed in the previous chapter. At first we do not notice that the very mild degree of pleasure experienced immediately before the homeostatic equilibrium point has become mild displeasure very soon after that point. But as time passes, the displeasure in the stimulus that previously was experienced as being pleasurable increases until we do notice it. At this stage the perceptive quest for pleasure related to a different stimulus begins.

Such a process might, I suggest, provide a possible explanation of our inability to remain either contented or bored for very long. Given the crucial importance of pleasure to our biological survival, it makes sense that our bodies might "abhor a pleasure vacuum" and so provide a disincentive to the continuance of such a state. I further suggest that, over time, this mechanism has become abstracted from its homeostatic origin and applies equally to pleasure/displeasure experience predicated on all stimuli both evolved and learned.

To date, there is no conclusive evidence to confirm or refute the suggestions that I make here. However, recent research[79] indicates that the experience of pleasure is not local (i.e. confined within the mesolimbic system) in terms of brain physiology as was previously thought, but occurs throughout the brain and is linked to unstable global brain states, as I suggest above. This research also shows that pleasure and desire, traditionally thought by neuroscience to be much the same experience

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[79] See Berridge, K C and Robinson T E. (1998, p309-369), Brain Research Reviews 28.
Also work by Edmund Rolls (2000), Oxford, and Jaap Panksepp (1998).

because they both appeared to be initiated and supported by dopamine production in the neurohumoral system adjacent to the brain stem, are largely (but not entirely) separate neurological functional operations. This is obviously relevant to the Kantian distinction (in the Analytic of the Beautiful, discussed in Chapter Three) between beauty as pleasure that is disinterested and apart from desire and pleasure in the agreeable that is not. It is also relevant to the more general problems with Kantian autonomy that emerge in this thesis. I return to a discussion of these matters later.

The results of study of food taste, consumption and pleasure outlined above are not unexpected because pleasure has been largely defined already in behavioural terms, and the behaviour of the experimental subjects is familiar to us from everyday experience. But these experiments do not rely on observations of subjects' behavioural action in the world alone. Additionally they rely on both the verbal reports of pleasure that are available from human subjects and on measurements of restrictions and increases in the subjects' alimentary tracts that are directly related to lack or surplus of food. That is to say, they correlate pleasure directly to the internal homeostatic dynamical changes within the subject as well as inferring the experience of pleasure from the subjects' behaviour in the external world. Thus these experiments move beyond the tautological situation in which behaviour is explained in terms of pleasure and pleasure is only observed in terms of behaviour.

Although these experiments yield results that are intuitively expected,[80] they are not, for that reason, trivial. It is important to both recognise and confirm the contingency of the dimension of affective sensation on the internal biological condition of the subject and to supplement the study of pleasure by observations that are not confined within behaviourist tautologies.

These studies, as Cabanac (1997, p5) describes, have shown that it is possible to dissociate pleasure from behavioural observation and also to demonstrate that the seeking of sensory pleasure, together with the avoidance of sensory displeasure, have beneficial homeostatic consequences. Pleasure is means of discerning useful stimuli and a motivation for approach behaviour towards such stimuli as well as the reward for such behaviour that has already taken place. Symmetrically opposite

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[80] As Cabanac (1997,p5) remarks, the affective dimension of sensation depends directly on the biological usefulness of the stimulus to the subject, and this dependence was noticed by the philosophy of antiquity. Aristotle (quoted by Pfaffmann, 1982) used the word "alliesthesia" to denote the contingency of the dimension of affective sensation, and to emphasise the importance of this contingency in relation to behaviour.

conclusions hold for the functioning of displeasure. Cabanac goes on to claim that the great advantage of this mechanism is that it does not require the participation of a high level of reasoning or cognition on the part of the subject. In support of this claim he cites the work of Garcia, Lasiter, Bermudez-Rattoni, and Deems, (1985) who studied the effect of the past history of subjects on their affective qualities of (alimentary) taste. These studies showed how illness experienced in association with a particular foodstuff completely changed their affective response to that foodstuff. Food that they had previously liked became repugnant to them. Five years after these events Garcia (1990) was able to show that the subjects experienced the same conditioned food aversion when awake, during sleep, or even under anaesthesia. The conclusion he reached is that as soon as a stimulus is discriminated, the affective dimension of the sensation, rather than higher order rational or cognitive activities of mind (that are suppressed during sleep and under anaesthesia), tell the subject if the stimulus should be sought or avoided. A surprising result of all these experiments is the strength and predictability of these conditioned or learned responses to stimuli that depend on the particularities of individual history and/or their relevance to the subject's intent. In the case of subjects instructed to seek out conditions of temperature most pleasurable to them, their behaviour could be predicted from mathematical equations relating their body temperature to external temperature conditions with the same degree of accuracy, as could their autonomic responses such as shivering or sweating.

I claim that these food aversion studies call into question the widely held belief that those behaviours that result from learning are somehow much less strongly imprinted within us than behaviours that are autonomic, that learned behaviours are categorically distinct from autonomic ones because they remain in some unspecified sense more voluntary than behaviours such as heartbeat or respiration. Autonomic responses are rightly considered to be involuntary and thus not to require higher-level cognitive or practical reasoning and to determine activities like pulse rate and respiration. In contrast, pleasurable or displeasurable discriminations learned through personal cultural experience and history are often thought of as unnecessary in comparison to autonomic responses, as somehow surplus activity over and above that of survival, as luxuries almost.

My point is that although the cultural objects onto which pleasure and displeasure responses are predicated may, as objects, be directly unnecessary to homeostasis and survival, pleasure and displeasure *as such* are not. Pleasure and displeasure

are, I claim, as necessary as breathing; we are naturally determined to have the ability to feel them because they are indispensable to our survival. In support of that claim I cite not only the neurological theories of affective responses discussed in this and the previous chapter, but also the evidence of Garcia's study cited above: that learned aversive responses are apparently as predictable and intense as autonomic responses. That is not to claim that learned responses in relation to, for example, particular works of art are universal in the same way as breathing is, but it is to claim that our ability to have such responses to art works is universal because our ability to experience pleasure and displeasure is so. In their operations, learned pleasure and displeasure responses are as predictable, replicable and of similar dimension as autonomic ones. I agree that, ultimately, autonomic responses may, and probably do, take precedence over proximate responses; it is unlikely that a person suffering acute respiratory problems from, say, an asthma attack will sustain aesthetic reflection on a work of art. Yet that does not imply that autonomic responses are somehow more universal than culturally learned responses because universality is an absolute and not a relative concept and does not rely on any judgement of the ultimate relative importance to survival of different activities.

The claim that learned pleasure and displeasure responses to stimuli are universal in us is consistent with Kant's claim that our ability to make aesthetic judgements (as distinct from the claim that all people actually do make the same judgements) is universal. However, it is not the same as Kant's claim because its universality is not ultimately based in universal communicability, consensual agreement or common sense (sensus communis as sense in common) but in the observed universality of learned pleasure and displeasure responses.

My claim that pleasure and displeasure responses, whether evolved or learned are necessary to survival and universal is not based on Garcia's studies alone. Additionally there is the large body of evidence, referred to in the previous chapter, that affective response emerges in the amygdala, or in the limbic system in general, and that the operations of higher reason are stimulated into action and always qualified by emotional responses and feelings that precede them. Moreover, a large number of clinicians have reported[81] that patients who have suffered severe bilateral damage to the amygdala by accident, disease or surgical excision do not exhibit

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[81] As reported in Freeman (1999, p141), Damasio (2000, p43-67 and 62-67), and Smith Churchland (2002, p214 and 227-228).

emotional behaviour or report having the feelings of pleasure or displeasure expected of them in response to stimuli.

More interestingly, from the point of view of this argument, these unfortunate people exhibit very great difficulty in to making decisions between future possible actions. Such decisions as they do eventually make appear to those who care for them to be random and often rationally inappropriate. On the other hand, patients who have suffered severe damage to the cortical areas of the brain that correlate to higher level cognitive and moral functions have no difficulty at all in deciding what they want to do and promptly doing it, though their decisions often appear to be socially or morally inappropriate, particularly so in those patients with severe damage to the frontal cortices. This group of patients also exhibit strong emotional activity and report strong feelings. Although I remain cautious about taking behaviour patterns in patients whose brains are damaged as offering demonstrative proof of the functional activity of the undamaged brains of well people, I believe that such studies may have a supportive role to play in helping our understanding of brain activity.

The conclusion that I draw from the above studies is that learned and evolved responses are very similar in their operations and both are universal in respect to our ability to make them. The point that I wish to emphasise is that although our learned responses may be built upon (and in that sense parasitic upon) our evolved responses when considered at the ultimate level, it may not always be useful to interpret learned responses in this way. It may, I claim, sometimes be more appropriate to consider learned responses in relation to each other rather than attempt to always refer them back to their supposed and somewhat inaccessible ultimate origins in the evolutionary process. This is what I call the proximate approach to understanding emotion and feelings, to understanding affective response. By analogy to the way in which we may look at a painting and respond to the image in terms of other paintings that we know, rather than in terms of the supposed subject matter of the painting before us, I call this the signifier-to-signifier approach to distinguish it from the signifier–to-referent approach that is more like the ultimate reference of learned responses to the operation of homeostasis in evolution.

Kant claims that the estimation of beauty is always singular on the grounds that, were it not so, a comparative objective concept would be introduced into our judgement thus contradicting his claim that beauty is apart from all concepts. It might be argued that if we took the proximate, or signifier-to-signifier approach to estimating

the beauty of a particular painting we are comparing its beauty to other paintings and, in Kantian terms, our judgement is not a proper one. On the other hand, we might also argue that our immediate judgement of the painting was that it is beautiful and that we subsequently go on, as we are entitled to do in Kantian terms, to consider the painting in the conceptual terms by comparing it to other paintings. I do not think this problem is very important and I am more interested in the difficulties that the foregoing discussion presents to Kant's claim for autonomy between his faculties of mind.

As already discussed in the previous chapter, the positivist-pragmatic model of the dynamical operations of the brain is deeply problematic for Kant's claim that the higher faculties of mind, pure reason, practical reason and aesthetic feeling, are autonomous, that is to say that each faculty is both free and gives the law of its own operation to itself. In the self-organising reflexive dynamics of the positivist-pragmatist model every activity of mind that neurologically correlates with an activity of brain is mutually inter-dependent with every other activity. Concepts such as Kant's discrete faculties of mind that are self-legislative in their operations, and are in linear, or even circular, causal relations with other faculties become difficult to sustain. As we have seen, reason, both pure and practical, is always already qualified by emotion.

What has emerged in the discussion in this chapter is that emotion is indispensable to the higher operations of mind that we call reason, but that the converse is not the case. It appears from the experiments of Garcia and the observations of clinicians that affective response is possible in situations in which the operations of reason have been temporally suspended or permanently severely damaged or destroyed.

Although Kant claims autonomy for all the higher faculties of mind, I suggest that we may reasonably draw from his work the conclusion that he regards morality, as given by the free exercise of practical reason, as ultimately in a position of authority over pure reason and aesthetic feeling; beauty is, for Kant, the analogical symbol of the moral and not the other way round. Neuroscience does not support that view. Although neuroscience does not deal in concepts of authority of one part of the brain over another part, I claim that it is fair to say that if asked to rank emotion, pure reason and practical reason in terms of indispensability for not only mere survival but also for well-being, most neuroscientists would put emotion at the top of the list. Evolutionists would certainly do so, if for no other reason than that emotional

responses are as old as the simplest living organism and the higher faculties of reason developed, in comparison, very recently indeed. Moreover, it is apparent from brain physiology and neural dynamics that reason is quite literally built upon the emotional apparatus of the brain. However, having said all that, we must recognise that we are as we are because we have the capacity for higher reasoning as well as for emotions.

A theory of beauty as pleasure and the common currency of motivations

I now want to turn to a discussion of the pioneering work of Michel Cabanac who has developed a theory of how we decide between various possible actions that are motivated by different or conflicting emotional claims. Cabanac's economic theory is an important contribution to our understanding of the role of pleasure and displeasure in decision-making and offers a new perspective from which we may interpret, in contemporary affective neuroscientific terms, the relationship between the Kantian judgements of cognition, practical reason and taste. As Cabanac points out, we are seldom faced with only one motivation at a time and so we need some means of ranking our emotional priorities to optimise our behaviour in relation to our biological needs.

Many of Cabanac's papers are very technical but he gives a review of his work in a paper given at the conference of the Association for the Scientific Study of Consciousness at Pomona, Canada in June 1997 and I draw on the contents of that paper in my discussion of his work below.

As Cabanac (1997) states, many explanations of predictive behaviour that are concerned with the proximate causation of particular behaviours actually operate at the level of ultimate causation through emphasising the evolution of traits that lead to reproductive success (my underlining). Cabanac claims that this is reasonable for animals but not for humans because, in the case of the latter, it is possible to obtain verbal reports on pleasure and so analyse in cognitive terms the proximate physiological and psychological mechanisms of decisions, thus going beyond the mere measurement of behaviour.

Cabanac describes his project as follows,

> *The thesis presented here is that the maximisation of pleasure and the minimisation of displeasure, not only leads to useful behaviour, but is also the answer to motivational conflicts. It is hypothesised that pleasure serves as*

> *the common currency of the trade-offs between clashing motivations, the displeasure of frustrating one motivation being accepted for the sake of a larger pleasure obtained in satisfying another.*
>
> Cabanac (p3, 1997)

In the same passage he goes on to explain that his experimental evidence for this claim has been derived, in the first instance, from situations involving only one motivation for a behaviour serving only one physiological (homeostatic) aim. Secondly he deals with situations in which two motivations compete for behaviour directed to the achievement of different physiological aims. He finally makes the last step to the analysis of situations in which motivations that do not proximately serve physiological aims are in direct conflict with those that do serve such aims. He then summarises the result of these experiments with the claim that his work has,

> *...allowed* (the) *generalisation of the pleasure theory according to which unpleasant and even noxious behaviours may be accomplished because they are traded off for pleasurable rewards.*

I shall shortly return to a brief outline of Cabanac's experimental procedures and results, but I cannot let pass the modest claim that he makes for his work without comment. In my view, Cabanac has achieved far more than he claims credit for. For example, his introduction of the notion of a "common currency" for pleasure opens up the whole field of investigation to economic theory; it makes possible the analysis of emotional motivations, pleasure and displeasure responses and intentional behaviour in the terms of a discursive practice hitherto largely unused in this field. All of these activities have possible implications for aesthetics. Cabanac does not pursue this line of enquiry in any detail because his interest is largely in the quantitative experimental demonstration of his thesis within the discourses of psychology and affective neuroscience. My own interest is to develop a new exegesis of Kantian aesthetics, using neuroscience rather than the supersensible substrate as the unifying ground that links together Kantian phenomena, noumena and beauty. The discussion that follows and the inferences and conclusions that I draw from Cabanac's thesis are, therefore, my own rather than his.

The notion of common currency, when applied to motivations not related immediately to physiological need (i.e. to homeostasis), introduces the idea that pleasure *as such* is a means of assigning *value* in all our decision making activities, and value is a moral, cultural and social concept as well as an economic one. The phrase common currency can mean, in contemporary usage, both cultural ideas and values together

with societal attitudes held in common by a social group, and also the money that circulates in an economy as the signifier of the exchange value of commodities.

Both neuroscience and a large body of philosophical tradition agree that the Kantian faculties (both higher and lower) of mind are involved[82] in decision making. In the Kantian system, practical reason, moral ideas and moral feelings are at the top of a hierarchical structure, below which come pure reason and aesthetic judgement, this last being in a somewhat inferior role to practical reason because it is the latter's analogical symbol. As already discussed,[83] Kant seeks to reconcile these faculties by his appeal to the supersensible substrate, a move that I have already criticised as being opaque to further enquiry.

My introduction of Cabanac's economic idea of pleasure as common currency in decision-making marks a radical change in the discussion and contests the Kantian hierarchy of the faculties of mind. Now, considerations of pleasure and displeasure become the arbiter of value and will have the final say in the conflicting and competing claims of cognitive, moral and aesthetic motivations when we decide upon an action. Anticipation of affective experiences, rather than simply the exercise of reason, becomes the ground of resolution between motivational conflicts, and subsumes the autonomy of the three higher Kantian legislative faculties of mind listed above. This is because one of these faculties, the aesthetic judgement, has now come to enjoy an arbitrating role in relation to the other two judgements. If the judgements of pure and practical reason ultimately depend on the actual or anticipated experience of pleasure, the feeling in us in our relation to the world around us that we call the beautiful, then beauty assumes the importance that I have sought for it, in nature and in art, throughout this thesis.

I admit to some initial surprise in finding my long sought after role for beauty in what amounts to an economic theory of its importance. On reflection, this is not quite so unexpected because the roots of the word economy derive from the Greek words meaning household and law; economy is about the organisation of the basic social unit of civilisation. The word economy still retains traces of this ancient meaning but has become somewhat overlaid by its use in a monetary context. Before discussing the common currency of pleasure in economic (in the monetary sense of the word)

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[82] As discussed in Chapter Three of this thesis.

[83] Also in Chapter Three.

terms I want to linger for a while on its original use in Hellenic antiquity. I do so in order to provide a sort of counter-balance to what I see as the masculine engendered systematic approach of both Kant and the modernist moment in history to philosophy, particularly in the fields of morality and aesthetics. Kant's critical philosophy is couched in juridical terms,[84] he divides the faculties of mind between legislative and non-legislative operations – and the former are the higher faculties. He only addresses feelings in depth in the third and last part of his critical trilogy, near the end of his life's work. That is not to suggest that his Third Critique is an afterthought, far from it. But it is to recognise that it is built upon, hence qualified by, the very grand and systematic structure of the First Critique in particular. The point that I am making is that the rigorous systematic argumentation of the First Critique, and the arguments of the Second Critique that are couched in terms of autonomous freedom, may not always sit easily with the concept of inter-dependent relationships and mutual feelings of empathy that are evident in successful family life and friendships. That is why I believe that I need to retain the meaning of the word economy in antiquity in any economic narrative of beauty that I construct. Not to do so is to run the risk of collapsing back into a systematic account that simply replaces the hegemony of reason with that of beauty. In a post-modernist society, that at least lays claim to cultural pluralism and some degree of restraint upon privilege based on gender and wealth, I believe that to be inappropriate.

To think about pleasure in the context of supporting and participating in the organisation of a family household or within a circle of equal friendships is to think about it in a very different way to the pleasure taken by a Wall St. broker or market maker in running his (and it almost always is his) business. The common currency of a household is our first experience of socialisation and education in terms of moral ideas and moral feelings. We learn, because we see them played out before us by our educatrice (and it almost always is a woman), about such matters as sympathy, empathy, consensual agreement and nurturing of others. We learn the value of the common interest rather than self-interest. Later in our childhood, at school, and at work and play, we learn about competitiveness, power and domination – and we usually learn it from men. This sort of learning comes later, like the lobster's shell. A carapace has its uses but it imposes severe limitations as well.

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[84] As he makes clear in his Preface to the Critique of Pure Reason (first edition).

I make this digression here for a reason - and for a feeling. If I am to describe a new sort of beauty, one that is couched in the economic terms of common currency, I want it to be understood in terms of the ancient meaning of the word economy as well as the modernist meaning of that word. The two meanings are antithetical and mutually contradictory, but that is the point; without both, one will dominate and I suspect that I know which one it will be. My motivation for wanting to maintain an endless deferment of the collapse of my use of the "economic" into a singular meaning is simple. I do not want to elevate beauty to the juridical role of unlimited authority over the judgements of practical and pure reason that are both mutually wholly autonomous for Kant. Rather, I want beauty, in the aesthetical judgement, to support and be supported by cognition and morality in a reflexive inter-dependent relationship that nurtures the exercise of all three judgements. At the same time, I want to make beauty as pleasure the ground (used now in an agricultural rather than prepositional sense) from which the cognitive and moral judgements grow. I propose that the positivist-pragmatic model of neuroscience discussed in the previous chapter is capable of accommodating both the monetary and the domestic interpretation of the economy of feelings of pleasure and displeasure that are at the heart of beauty.

Returning now to Cabanac's thesis, that the maximisation of feelings of pleasure together with the minimisation of feelings of displeasure are the common currency of resolving conflict between motivations, I want to draw inferences from that thesis using the term common currency in the monetary sense of economy. The term common currency implies that a currency is universally acceptable within a nation state or a group of such states. Additionally, currencies of one nation or group of nations may be traded for all other currencies outside a particular currency zone, through the workings of the exchange markets, which consensually agree exchange rates. Attempts have sometimes been made by an individual nation to protect the value of its currency through attempts to frustrate the wish of the international currency markets to reduce its value; the means employed have usually been either buying its own currency on forward contracts in the market or by introducing exchange controls for its citizens or subjects. Such attempts have always failed in the medium or long term. The point here is that the money markets actually do work by consensual agreement between traders and not by the unilateral actions of national governments or their central banks. By analogy then, Cabanac's claim that pleasure serves as a common currency of decision making implies, I claim, not only the universality of pleasure but also that its "value" is achieved by the consensual agreement of all those involved. The phrase "all those involved" means, in the

context of this thesis, all the activities of mind (the faculties of mind in Kantian terms) and all their correlates of the dynamical operations of the brain in neurological terms. Thus Cabanac's thesis, even taken in monetary terms, implicitly contains ideas of consensual, hence socially constructed, agreement. Such agreement supports moral ideas and feelings. His thesis thus appears to offer the possibility of relating those pleasures that we consensually agree to call beautiful, to moral ideas and feelings, and in this respect to be compatible with the Kantian theory of beauty.

In economic theory at least, the price of goods and services is consensually agreed between buyers and sellers. If the price is too high, buyers will not purchase goods and the market is oversupplied relative to demand, causing the price to fall to the point where supply and demand are in equilibrium. A symmetrical argument applies if the price is too low, demand is excessive in relation to supply and the price rises. Such an economic theory of the price mechanism requires perfect knowledge of the market by both buyers and sellers. In practice, this ideal situation is seldom achieved, but in real markets it is often closely approximated, particularly in relation to commodities, especially so in the trading of currency which is a commodity in contemporary economies.

By analogy, the brain may be presumed to "have perfect knowledge of its own market" in the trading of its conflicting motivations and to "price" them in terms of pleasure and displeasure in much the same way as we decide to make, or refrain from making, a purchase through considering it in terms of the opportunity cost of other purchasing decisions that we might make that are equally pleasurable – that are "for sale" at the same price. Moreover, this market analogy introduces a temporal aspect to pleasure based decision making. Buyers in a market economy are sometimes willing to defer enjoyment of a particular pleasure now, if they have the expectation that, by such restraint, they will be able to enjoy a greater pleasure later. They may also decide to accept the displeasure of debt in the future if they can obtain credit to obtain pleasure now.

The implication of all this is that decisions are made between conflicting motivations such that displeasure is tolerated providing it is outweighed by pleasure that is anticipated either now or later. Analogically, I claim decisions regarding conflicting motivations that arise from judgements of pure reason and moral judgements are

resolved in the same way and are proximately[85] made in terms of feelings of pleasure, of beauty, either immediate or deferred, as the mechanism of evaluation. Such an argument requires that both the exercise of pure reason and practical reason are capable of being experienced as pleasurable or displeasurable, a requirement that is entirely consistent with Kant.[86] However, Kant does not really explain how the judgements of pure and practical judgement relate to each other except through his appeal to the supersensible substrate. Particularly, I claim that he does not adequately resolve the situation in which our faculties of pure reason and practical reason give rise to conflicting motivations – the by now familiar problem of reconciling necessity to freedom. He resolves this problem by assigning to practical reason what, I claim, ultimately amounts to a primacy over both pure reason and the aesthetic judgement. Yet, in a sense, I claim that he had the opportunity to resolve the problem through the feeling of pleasure that is experienced in all three judgements of cognition, morality and aesthetics respectively. Instead he chose to refer all three judgements upwards to the supersensible substrate, an idea of mind that is, by definition, capable of unifying these three judgements but is epistemically opaque.

<u>Beauty as the ground for all actions</u>

In contrast, my move here is, in a limited and qualified sense, to refer cognition and moral judgements downwards to the embodied feelings of pleasure and displeasure

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[85] I use the term proximately here to emphasise that these decisions are taken in terms of pleasure as such, pleasure in the moment, which may be, but is not necessarily, experienced in connection to stimuli that have become affectively competent in the distant past through the mechanism of evolution.
There is degree of similarity between the remoteness of evolution and the opacity of the Kantian supersensible substrate of humanity and phenomena; we cannot know anything about the latter and we don't know very much about the former that is not suppositional.
For this reason I have chosen to emphasise the importance of the proximate operations of pleasure and displeasure in comparison to the ultimate ones. I believe that, in most decisions, we tend to concentrate on pleasures and displeasures as such, which, as I have suggested before, have become operationally dirempted from their ultimate origins in evolution and their ultimate homeostatic purpose.
Proximate pleasure/displeasure based decisions have something of the quality of purposiveness without purpose: like the Kantian aesthetic judgement. Decisions that flow from ultimate pleasure responses only might, analogically be considered to be for a known ultimate end or purpose.

[86] As discussed in Chapter Three, the pleasure taken in aesthetical judgment results, for Kant, in the harmony or optimal ratio between understanding and intuition and this same optimal ratio is necessary *for cognition and its communication to others*. *Pleasure is necessary for cognition and sufficient for the* aesthetic judgement. Kant claims that we find pleasure in practical judgements through the exercise of our transcendental freedom in (Kantian) morality. This freedom is freedom from externally given authority and determination by objective considerations for such judgements, and the positive freedom to construct our own moral laws. Additionally, for Kant, the form of the aesthetic judgement mirrors the form of the moral judgement. For Kant, pleasure is experienced in the form of judgement itself.

in us that are the ground of the aesthetic judgement. These feelings are what we call beauty.

Firstly, I do not want to give the impression that I am simply replacing the moral by the beautiful in a Kantian hierarchy of autonomous judgements, that in referring downwards to beauty, that I am simply elevating beauty upwards to replace morality in the Kantian system. I do not consider the faculties of mind to be wholly autonomous from each other, for how can they be, if pleasure and displeasure are the common currency between them all, partially constitute them all individually and result from operations within each of these judgements? Certainly, one can distinguish between theoretical cognition, morality and aesthetics but to do so, I claim, is a semantic distinction and not an ontological one. I also claim the support of neuroscience for my view that these judgements are not wholly autonomous from each other because such a conclusion is also consistent with the activist-pragmatist model of the reflexive dynamical operations of the brain discussed in the previous chapter.

In terms of the monetary interpretation of Cabanac's claim that pleasure is the common currency of deciding between conflicting motivations, the Kantian faculties of mind are similar to currency traders in different countries trading their own national currency (that may be strong or weak) against the (consensually agreed) reserve currency. No single trader can control the market and all the traders have the same interest: to make money. They will happily sell their own national currency short to make a profit. If one replaces the term currency trader by a faculty of mind and the term national currency by a particular judgement such as, for example, moral judgement, the analogy is clear. Moreover, although a particular judgement is pleasurable to a degree, the maximum pleasure for all the traders is derived from a profit made in the reserve currency: pleasure as such.

As discussed in Chapter Four, emotion is the basis of feelings because the latter result when we form a mental image of our body state that results from the former. Emotion and hence feelings are the beginning of the reflexive loop of perception and emerge in the meso-limbic[87] system of the brain. As we have seen in Chapter Four,

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[87] I use the term meso-limbic because the precise mechanisms within the limbic system (and the extent of its boundaries from within which emotion emerges) are part of an ongoing debate in neuroscience. Although the origin of perception is different in the positivist-pragmatist and cognitive-passivist models, both agree that emotion and feelings emerge principally within the meso-limbic system, that is to say

the emotionally laden neural signals proceed upwards from the meso-limbic system to the higher (literally and metaphorically) area of the brain and the frontal lobes that are thought to be involved in complex reasoning, moral choice, detailed long-term memories and cultural learning and the making of considered decisions in awareness. Reason, both pure and practical in Kantian terms is thus qualified by the emotional content of the output from the meso-limbic system.

This process leads me to the second point that I want to make in talking about my ideas of beauty in comparison to those of Kant. It follows from the discussion immediately above that the "material with which pure and practical reason has to work" – the information from the meso limbic system – is not emotionally neutral. There are, in a real sense, no purely objective facts of the matter upon which pure and practical reason can operate in a totally dispassionate (by which I mean emotion-free) way.

To emphasise the importance of this point, I compare it to the familiar operations of Kantian sensibility. As I described in Chapter Two, Kant proposes that all our knowledge and experience of objects in the world, upon which Kantian pure reason operates, have already been qualified in spatio-temporal terms (have become phenomenal) by the pure a priori intuitions of space and time in us. This is the basis upon which Kant's transcendental idealism (set out in the Introduction to the Transcendental Aesthetic in his First Critique) is built. Kant claims that we can have no knowledge and experience of objects other than as they appear to us in spatio-temporal terms.

Similarly, I now claim, on the basis of the evidence of neuroscience described here and in the previous chapter, that we can have no knowledge and experience of the world other than in emotional terms. Analogously to Kantian sensibility therefore, I claim that emotion is a condition for the possibility of the world of objects for us in experience. Because the later stages of emotion are felt by us in awareness and these feelings both motivate and reward intentional action I claim that we cannot take intentional actions – that include the mental actions described in Kantian terms as the judgements of reason – in a way that is apart from feelings. Moreover, in behavioural terms, actions are either to do with approach or aversion, the emotional correlates of which are, in awareness, the feelings of pleasure and displeasure. Feelings of

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within the relatively small part of the brain that lies around the brain-stem bulb at the top of the spinal chord. Not all neuroscientists agree that emotions emerge only from within the meso-limbic system.

pleasure and displeasure are, in turn, the basis of beauty and the aesthetic judgement. Thus the enormous importance of the affective experience that we call beauty is revealed and supported by neuroscience.

Because of the importance of this claim for beauty, that it is indispensable to the operations of the higher and legislative Kantian faculties of mind, I recapitulate the neurological evidence for that claim below.

According to the positivist pragmatic theory of neural dynamics, the first step in the process of perception is an endogenous one. The search for sense stimuli relevant to our needs at a particular time and formed within us in terms of the relation between the internal conditions within our bodies to the conditions pertaining in the outside world, arise in us within the meso-limbic system[88] that is situated immediately around the brain stem.[89] It is in the meso-limbic system that our general intent emerges, for example the need to seek food. The limbic system sends information about this general intent upwards to the higher reasoning areas of the brain and to the sensory cortices to alert them to the nature of our need and to prepare these areas for the expected inflow of sense information from all our sense organs relevant to that need. The upward flow of this information is qualified in two ways: spatio-temporally and emotionally. Very broadly, it is constituted in spatio-temporal terms in order for us to make any sense at all of ourselves in relation to our situation in the world of objects and emotion is attached to the information to indicate what sort of sense, what sort of meaning, that we need to make of the spatio-temporal information. The important point here is that no information reaches the areas of the brain that correlate to the operations of reason, memory, learning, culture and history unless it has already passed through the meso-limbic system that both spatio-temporally constructs it and emotionally contextualises it.

The next step of the process is for these higher reasoning areas of the brain to send their signals, now qualified by cognition, moral value, history and culture, back down to the brain stem, via the motor cortices and hence, via the nervous system, to the internal organs and musculature of the body to put into effect an action or series of

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[88] The small and very ancient part of the brain that includes the bilateral nuclei of the amygdala that lie on either side of the brain bulb and are close to the thalamus and hippocampus – see next footnote.

[89] This is also the area that includes the thalamus and hippocampus that are thought to be intimately involved in the space-time loop of pre-afference (see Chapter Four). It is where incoming sense data is converted into spatio-temporal terms.

connected actions in the world. But on the way to the brain stem bulb, a large proportion of these signals from the higher reasoning areas of the brain pass through the limbic system again and the rational content of these neural signals "seeps into"[90] the continuous formation of emotion in which the meso-limbic system is engaged. Thus the next loop of emotional output is itself qualified by pure and practical reason, memory, history and culture. This new emotional output from the meso-limbic system then flows up to all the higher areas of the brain for reprocessing. But, and this is the crucial point, the new information signals reaching, for example, the higher part of the brain that deals with cognitive reasoning and understanding, is now itself qualified not just by simple emotion as in the first loop of the process; it is qualified by a second stage emotional signal that is itself cognitively, morally, culturally and historically mediated by the products of the first stage loop. The same sort of description would have applied to all the areas of the brain that are involved in the formation of memory, morality, culture etc. should I have chosen one or all of these, rather than cognition, as my example for the second stage loop. These processes occur several times a second and faint (and always slightly changing) traces of them persist for long periods of time in our memories.

By this simplified example we begin to imagine the enormous complexity of the processes involved in our everyday – or rather several times each second of every day – activities. At the same time the basic idea is the relatively simple one of reflexive mediation and relation that is quite different not only from linear causality but from circular causality as well. In reflexive processes each and all of the elements involved "folds onto"- and hence qualifies – every other element and is also "enfolded by" – and thus qualified by - all the other elements. It is easy to represent linear and circular causality graphically, but difficult to draw an image of reflexive relation; one has to draw ogive shaped curves between each element and every other one and even with relatively few elements one ends up with what looks like a series of figures of eight superimposed upon each other. The curves merge into one another and it is very difficult to see what is going on. This problem is interesting in itself because it seems that in our inability to form a coherent (spatio-temporal) image of reflexive causality we are pushing at the limits of our own spatio-temporal abilities – or pure a

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[90] This "seeping into" or "colouring" of rationality by emotion and emotion by rationality, for example, arises, in neurological terms, both because the reflexivity of the loops that connect the specialised organs of the brain and because of shared neural pathways – shared circuitry – that carries signals to and from the different parts of the brain. More than one type of information is carried on the waveforms that flow along these neural pathways at a time. For example output from areas concerned with cognition may be carried on the same wav form as output from, say, cultural learning and memory. The neural circuits thus act like carrier waves for many different waveforms at once.

priori intuitions in Kantian terms. Since these intuitions are, for Kant, the conditions of possibility for our cognition of objects and hence our phenomenal understanding, and since the latter includes the concept of causality itself, I have the feeling that we may not be able to easily resolve this difficulty.

Returning to the discussion of the support afforded by our neuroscientific understanding of the dynamics of the brain in relation to the autonomous faculties of mind in the Kantian paradigm, I claim that the idea of wholly autonomous faculties of mind is untenable from the standpoint of affective neuroscience. Kantian autonomy is, I claim, problematised even by the cognitive passivist model of perception,[91] but is made even more problematic by the positivist-pragmatic one.

The implications of the positivist-pragmatic model of neuroscience for Cabanac's economic theory of pleasure as the common currency (in the monetary sense of the phrase) of the value judgements involved in decisions between different and conflicting motivations is far more encouraging. As I have just described, all the ongoing reflexive loops of the activities of the brain are routed through the meso-limbic system that generates emotion and hence feelings of pleasure and displeasure.[92] In the economic theory of pleasure the meso-limbic system around the amygdala[93] has a role similar to that of the national Central Bank, the Treasury and the Royal Mint combined; it controls the money supply, and prints the money of pleasure. The point that I am making is that the particularities of brain dynamics according to the positivist-pragmatic model of neurology are compatible with, and supportive of, the ideas that I have drawn out from Cabanac's research. In the domestic sense of the word economy, the meso-limbic system is analogous to the consensual decisions that are required to reconcile the conflicting needs and aspirations of family members within the financial constraints of family income. The

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[91] The passivist-cognitivist model also regards emotion as indispensable to intentional actions, including mental actions. Though the passivist model is not so sophisticated as the positivist one it shares with it the central role of emotion in intentional action.

[92] As stated in Chapter Four, about 90% of the output from the higher rational areas of the brain is fed back into the reflexive loops within the brain through the limbic system. Only about 10% of brain output flows down the spinal chord to the sensory motor and other somatic systems of the body. In other words *the brain devotes almost all its energies to internal reflexivity, to what might be thought of as* deciding policy and comparatively little energy to "purely executive commands that enable the implementation of policy".

[93] Recent research modifies the idea that pleasure is only generated in the limbic system itself; there appear to be other "sub-contracted" areas distributed throughout the brain and I shall address this *matter in a later section of this chapter. These subsidiary sites will modify but not invalidate the* argument that I make here.

alternative analogies of the operations of a command economy or the decisions handed down by a Victorian patriarch are not supported by the observed functional dynamics of the brain that are so clearly not based on wholly autonomous structures.

In writing this chapter so far, several potential difficulties within the narrative have occurred to me. I have dealt with some, but not all of them, either because I have not been able to see how to resolve them or because I have felt that do so would disrupt the narrative flow and the argument that I was developing at that time. Before proceeding to the next section of this chapter, I want to comment on some of these problems.

The first of these difficulties relates to the distinction that affective neuroscience makes, and which I have used, between emotional responses in relation to stimuli that have been learned and those that are thought to have evolved. This is, in broad terms, the distinction between nurture and nature as the origin of affective responses. It also relates to the distinction between the proximate and the ultimate origin of the feelings of pleasure or displeasure that we experience in perception of certain stimuli. The question arises as to what are the differences and the relationship, if any, between learned and evolved responses that are separated in their emergence within us by a vast period of time. What I am looking for is a concept that will relate these two types of affective response to each other.

Earlier in this chapter, I mentioned the work of Garcia (1985) (1990) which demonstrated that learned aversive responses neither require the operations of higher reason (his experiments with anaesthetised subjects) nor are of any lesser strength and predictability than are aversive responses that are thought to have evolved and are classified as autonomic. Valuable though that work was, it is of limited application because it only refers to unpleasant aversive responses and not to pleasurable ones. Caution is needed when generalising from aversive to approach responses for two reasons. Firstly, such extrapolations often assume pleasure to be the symmetrical opposite of pain or fear, which some neuroscientists, notably Freeman (1999b), dispute. Secondly, subjects who are undergoing medical procedures (such as the inducing of general anaesthesia) are often in a heightened state of anxiety and even fear at the beginning of the study. Such antecedent states may well act as a contaminating variable to the variable under study, for example to an aversive reaction to a particular food taste. For these reasons, I believe that the problem requires a more general conceptual resolution.

Because the problem is set up in terms of the dichotomy between nature and (cultural/social/historical) nurture, what is at issue here is the by now very familiar conflict between the domination and necessities of nature on the one hand and the freedom that we seek in culture on the other. That, in a sense, is the ultimate cause of the difficulty and is never going to be easily resolved. However, I suggest that some progress might be made in looking at the proximate cause of the problem instead. This I claim, is the way that homeostasis, which is the ultimate biological origin of affective response and intentional action, is defined in terms of a single discrete organism in relation to the world beyond its physical boundaries. In theory, the optimisation of the internal milieu of such an organism within the context of the conditions around it could include the optimisation of its feelings of pleasure that result from its social relations and interdependence with other organisms of its own or a different kind, but in practice this social aspect is often ignored or reduced to a genetic explanation such as its desire to pass on its genetic qualities to future generations. The explanation that this desire comes "pre-installed" as instinct, itself a genetic explanation of the problem of how animals have this genetic interest, seems inadequate and tautological.

A problem with all phenomenal and hence causal explanations of nature is that they are synchronic, an effect is always explained in terms of an antecedent cause that is itself the consequence of another cause, and so on. Moreover, these explanations are in terms of linear or circular causality that is supposed to occur between autonomous, in the sense of discrete, objects. I have already discussed some of the problems with the idea of causality in Chapter Four and so do not repeat them here. I do not know how this problem is to be resolved, but I suggest that some progress might be made if the concept of homeostasis were broadened to take more account of the fact that the sort of animals that we have the most interest in (higher vertebrates and humans) do not live as singular discrete entities but in social groupings that are as indispensable to their survival and well being as are their individual homeostatic operations. I am arguing for a neo-homeostasis that is also diachronic in terms of its reference to the self-organising dynamics of groups,[94] such dynamics being conceived in terms of reflexive rather than linear or circular causality. Such a theory would be couched in terms of group interest in the group as such,

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[94] This model of homeostasis would differ from the traditional model in a fundamental way, just as the algebra of Group theory differs from the algebra of discrete entities.

rather than in individual objective interest.[95] What I also have in mind is a homeostatic interpretation that has the same form as the self-organising dynamics of the brain and which is also similar to the analogy of the dance that I mentioned in the previous chapter.

The second of the difficulties that emerge from this thesis and which I have not so far addressed is the question as to whether affective neuroscience distinguishes between pleasure and desire as the motivation for intentional action. That is to say, is neuroscience using the term pleasure in the same way that Kant does or in the way that he uses the term desire, or in a way that is constituted by both of these?

By the terms pleasure and displeasure, Kant is referring to our feelings that, for him, are our immediate awareness of being alive, or of the general effect of something or some event on the activity of living. Life, for Kant, is our ability to act according to desires and purposes. If an activity furthers our desires and purposes, or if it furthers our sense of our general ability to act (our sense of agency) then we call that activity pleasurable. If, on the other hand, an activity frustrates our desires, feelings and agency we call it displeasurable or painful.

Pleasure and desire: neuroscience and disinterested beauty

Although Kant situates feelings and desire in separate and autonomous faculties of mind and within each of these two faculties, distinguishes between the higher legislative and lower corporeal forms of feeling and desire, he is quite explicit that pleasure accompanies the exercise of judgements made in terms of all the faculties of mind. Kant claims (Caygill, 1995) that pleasure accompanies every practical judgement insofar as "The attainment of every aim is coupled to a feeling of pleasure". Similarly pleasure accompanies theoretical judgement, "by reason of the most ordinary experience being impossible without it". In the aesthetic judgement of taste pleasure assumes an all-important position in which it "denotes nothing in the object, but is a feeling which the subject has of itself and of the manner in which it is affected by the representation." As Caygill (1995, p321) remarks, "Pleasure/displeasure is well on its way to becoming identified with vital force – with

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[95] This sort of approach would enable the incorporation of moral considerations into biological explanations of intent, motivation and pleasure. In addition to mere self-interest, group interest would play an important role and that would facilitate a closer compatibility between the Kantian approach to pleasure and aesthetics in which the concept of (objective) disinterest is so important because of Kant's interest in analogically relating the aesthetical judgement to (Kantian) practical judgement.

the feeling of life – and even the mind as such." In support of that remark he cites from Kant's Critique of Judgement,

> *"For, of itself alone, the mind is all life* (the life principle itself), *and the hindrance or furtherance of it has to be sought outside it, and yet within human beings themselves, consequently in connection with the body."*
>
> (prop. 29)

This is a profound statement even for Kant. From the point of view of reconciling the Kantian theory of pleasure and the ideas of affective (embodied) neuroscience it would surely lead a "dream team" of quotations. It locates pleasure as something felt in the mind yet both fostered and limited by something not of the mind itself, a form of critical discursive methodology that is so typically Kantian; and because it is so characteristic of his entire critical work, suggests that this is more than a casual remark. In its reference to the embodied nature of pleasure it holds out the possibility of being commensurate, even compatible with the discourse of neuroscience. It links pleasure, via its experience in the mind with "*all life*". In short, it looks like very good news for those who want to use both Kantian aesthetics and affective neuroscience to critique, and re-inscribe each other, as I do. This ambition is not directed to achieving an identity between these two discursive practices because, were that to be achieved, the possibility of mutual criticality (in the Kantian sense of limitation of each by reference to something distinguishable from it) would be lost. All that is sought here, therefore, is a higher degree of relational interdependence between the two paradigms.

The quotation cited from Kant is certainly useful, but problems remain because Kant (1798, Anthropology from a Pragmatic Point of View)[96] distinguishes between sensuous and intellectual pleasure/displeasure. He subdivides the former into pleasure caused by sensation or imagination; he gives examples including food, tobacco and sex. Sensuous pleasure/displeasure of the imagination is distinguished from sensuous pleasure/displeasure of sensation if it is also a partly intellectual pleasure or displeasure. The sensuous pleasures/displeasures of the imagination are what is of most interest in this thesis, because examples of these are pleasures in beauty and aesthetic taste.

In his Metaphysics of Morals (1797), Kant situates the division of pleasure/displeasure in a different way. Here, intellectual pleasure is called a

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[96] Cited in Caygill (1995).

"pleasure of inclination" if it both precedes a determination of desire and involves an object. If an intellectual pleasure both precedes a determination of desire and also does not refer to an object it is a "contemplative pleasure of taste". If it comes after such a determination of desire, Kant calls an intellectual pleasure an "inclination of reason".

This complex taxonomy of pleasure arises from, and exemplifies, Kant's motivations for his pleasure of taste. From the above Kantian classifications of pleasure we can see that the pleasure of taste is a sensuous pleasure of the imagination because it is partly intellectual. But that alone in not sufficient to make it a contemplative pleasure of taste; additionally its intellectual element must come before a determination of desire (otherwise it would be an inclination of reason) and that intellectual element must not involve an object (if it did, it might involve not only objective interest but a determinate judgement of understanding).

This complicated scheme has an analogy in the Critique of Judgement (Caygill, 1995, p321). In that work, Kant introduces a new taxonomy of delight that is distinct from pleasure/displeasure in general and he translates the sensuous, imaginative and intellectual pleasures discussed above into the delights of the agreeable, the good and the beautiful. Kant, in the third proposition of the Critique of Judgement, defines delight as the "sensation of pleasure" and also as the "determination of pleasure or pain".

Delight in an object that is desired is what Kant calls the agreeable. Delight in the good or in perfection is, for Kant, practical (moral) delight. Delight in the beautiful has to satisfy more stringent, additional conditions. As I have already mentioned in Chapter Three, in my discussion of the Analytic of the Beautiful, our pleasure in the beautiful (now called our delight in it) must be without interest, subjectively universal, final without end (purposiveness without purpose) and necessary but not containing a concept.

The purpose of my return to these conditions for Kantian beauty in this chapter is to discuss if they are compatible, and to what degree they may be so, with the ideas of affective neuroscience set out in this and the previous chapter.

Firstly, are Kant's conditions for our delight in beauty, that it is free of interest, compatible with affective neuroscience? By the term interest, Kant means (in the

Critique of Judgement) either what he calls pathological interest, the interest in the real existence of the object as agreeable to the subject's corporeal desires or pure interest. Pathological interest is interest in an object, not in itself, but only insofar as it is pleasant for me. Pathological interest is thus individual self-interest. By pure interest, on the other hand, Kant means an interest in an action for its own sake, as good in itself, as will based on principles of reason alone. Pure interest is a moral interest in the common good. Like pleasure in beauty at the level of aesthetic judgement, pure interest is universal and consensually agreed. Kant's motivation for separating these two aspects of desire is to ensure the autonomy of the moral law from the pathological interests that it is supposed to regulate. Kant defines the quality of the aesthetic judgement of taste in proposition five of his third Critique as being apart from any interest, either pure or pathological. This move is necessary because if the aesthetic judgement has interest, either pure or pathological, in the real existence of objects, then it is in danger, as we have seen in Chapter Three, of identification with determinate judgements (such as cognition), which invalidate the formal, reflective nature of the judgement of taste. As Caygill (1995, p261) points out, the judgement of taste avoids being directed towards the *discrete* ends desired by reason, both pure and applied, but is rather a question of orientation in the world.

Science in general does not concern itself with the real existence of objects; it simply assumes the reality of objects for the purposes of its discursive operations. Because the philosophy of science, though not all scientists, recognises this assumption, I claim that science recognises the contingency of real objects. In his First Critique Kant is only interested in objects in so far as we can have epistemic relations to them in experience. In this respect Kantian and scientific thought are, as Clement Greenberg pointed out in his essay Modernist Painting, very similar.[97] Science (though not all scientists) is indifferent to the questions about the absolute existence of objects. Kant denies such existence for the world of objects, but that difference is not relevant to this discussion. Both Kant and science, I claim, recognise the contingency of real objects.

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[97] It seems likely that Greenberg may have had in mind Kant's explicitly stated admiration for the work of Isaac Newton. Even in the 1960's scientific thought had long since ceased to be based on Newtonian concepts and is even less dependent on them today. So although Greenberg was correct in linking Kantian thought to the scientific thought of a generation or two before Kant, the same link cannot be sustained between Kant and science today.

The important area of discussion here centres on the question of whether pleasure in terms of affective neuroscience is distinct or not from Kantian pathological interest or corporeal desire. Ten years or so ago, the answer to that question would probably have been that it was not. At that time, neuroscience tended to conflate corporeal desire and feelings of pleasure together; most research into affect was directed to finding neurological correlates for approach behaviour and motivation in terms of desire, a term that was not distinguished from pleasure. Neuroscience had identified the neurocircuits and the neurochemical involved, dopamine, as the stimulus for intentional action and the reward for such actions that have value for survival and well-being. A very large body of research supported this point of view.[98] Typical of that research, were experiments in which animal and human subjects were given drugs to block the dopamine receptors in the brain. Experimenters observed loss of motivational behaviour and appetite in these subjects. In experiments on rats, Berridge and Robinson (1998) completely destroyed the dopamine production system in the rats' brains using neurotoxins, and observed that they would voluntarily starve to death, even in the presence of food, unless the experimenter intervened and fed them. When force-fed with sweet food such as sugar, the rats showed positive behavioural response, and when force-fed with quinine, which is bitter, they showed negative responses. Such reactions to sugar and quinine are entirely normal and expected in rats. Berridge concluded that the rats, despite the destruction of their dopamine-fuelled reward area in the brain, could still experience pleasure and displeasure in relation to food; they still "liked" sweet food and "disliked" bitter food, yet felt no "need" for either. Subsequent experiments were carried out on human subjects who were given drugs to temporally block or enhance their brains' dopamine receptors and thus their appetite for food. Each subject made taste reports when given various foods that they had either liked or disliked before the drugs had been administered. Their reports on taste remained exactly the same in terms of liking or disliking each of the different foods (as did their reports on the intensity of these feelings) and appeared completely independent of their enhanced or diminished desire for food.

Following Berridge's early work, many other experimenters studied the response of both human and other animals to a variety of different stimuli and reached the general conclusion that pleasure may be experienced without desire. More recently the reverse procedure has been investigated; Pecina & Berridge (2000) gave people

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[98] Research on how the dopamine system works has never been short of funding because of its perceived relevance to alleviating the social problems resulting from drug addiction.

the chemical naloxone, which blocks the naturally occurring brain opioids, such as endorphins and encephalins that have long been associated with pleasure responses. The effect of naloxone is to suppress the intensity of pleasure. The subjects reported loss of taste in foodstuffs but showed no reduction in the amount consumed. Though their pleasure in food was greatly reduced their desire for it was not.

The experiments described above refer, in Kantian terms, to pathological interest, to corporeal desire. They are all studies that involve the subjects' pleasure and/or desire for discrete objects that have been determined in cognition by the subjects. They are about individual self-interest in the objects insofar as they provide pleasure for the subject in consumption and do not involve an interest in the object in itself, or as such. Panksepp J (1998) found that young rats that exhibit distress when separated from their mothers released opioids in their brains and exhibited normal calm behaviour when their mothers returned to them. They also exhibited the same change of behaviour when their brain opioid production was artificially increased and their mothers did not return to them. Panksepp concluded that feelings of social pleasures, particularly comfort and safety associated with social bonding are produced by opioids too. The link to social pleasure is interesting, I suggest, because although it clearly does not go so far as to link natural opioid production in the brain to Kantian moral feeling, it does link it to social behaviour. The importance of Panksepp's study is that it differs from previous research that linked a subject's opioid production and pleasure experience to phenomenal objects such as food. Now, however, such a connection is established in the context of the relation of individual subjects to other humans: to noumenal objects. Social pleasure of this sort seems to be more appropriately described in terms of Kantian pure interest rather than pathological interest.

Following on from the experiments described above, a great deal of work has been done on the detailed structures of the brain that initiate and receive both opioid and dopamine production. The current view is that the site of opioid production is the ventral palladium, a small region within the limbic system immediately adjacent to nucleus accumbens that produces dopamine. Berridge, & Robinson (2003) have shown that the output of dopamine passes through the nucleus of the ventral palladium where it is qualified with feelings of liking or disliking and then passed on to the cortex of the brain. This description is, as they acknowledge, a simplification because much of the neurological circuitry for the production of pleasure producing

opioids is shared with that for dopamine production that leads to desire; and some of this sharing extends right down to individual cell level.

The production and reception of pleasure enhancing opioids is also far more complex than previously thought. According to Rolls (2000) and his group, pleasure is not just produced in the very deep areas of the brain, as previously thought, but in many other areas of the brain as well. Initially, these secondary pleasure production sites were identified in the orbitofrontal cortex (one of the first areas of the brain to process incoming sense information). More recently, Rolls has found such secondary sites all over the cerebral cortex; opioid producing cells and clusters of cells are distributed through out the brain. The really astonishing aspect of this research is the extreme specificity of the very small number of neurons that comprise these sites.[99] Some of these tiny areas respond, for example to sweet tasting but not to fatty tasting food, some respond to the subjects being given a financial reward but not to other stimuli. Rolls and his group have concluded that although most of these very specific pleasure response areas may well be the result of evolution, many of them are not and have been formed through individual learning and experience.

Before discussing the possible implications of all this research for aesthetics, I want to sound a note of caution, particularly in respect of the earlier experiments that used drugs to block dopamine receptors or the production of opioids. These experiments showed that certain animals and humans could feel pleasure without desire and desire without pleasure. The experiments did not take place in normal (drug free) circumstances and therefore are not a demonstration that we or other animals experience pleasure and desire separately in everyday life. However, the later drug free fMRI experiments of Rolls and others have tended to confirm Berridge's conclusions inasmuch as they have shown that the brain circuitry and neuro-chemicals that appear to be the neurological correlates of pleasure and desire (conceived as liking and wanting respectively) are distinguishable in their operational functions and in subsequent behaviour patterns of subjects but also share some of their neurological properties together. I think it is fair to claim, as I do, that contemporary affective neuroscience supports the view that to distinguish between pleasure and desire is more than a semantic nicety, but less than an absolute distinction.

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[99] The use of fMRI scanning, with its extremely fine spatio-temporal resolution has made this micro level research possible. See for example, Kringlebach, De Araujo & Rolls (2003).

Affective neuroscience thus both supports and contests Kant's taxonomy of pleasure. It supports his view that desire for an object is not the same as taking pleasure in its presentation to us. Neuroscience also supports the idea (evidenced by the work of Berridge and others) that the possibility exists for us to take disinterested pleasure in an object's presentation to us even though we have no desire for it merely through our own pathological interest in it. However, neuroscience does not imply that pleasure and desire (as interest) are autonomous from each other and that we usually experience pleasure and desire separately from each other. Because the main production site of opioids (the ventral palladium) is so close to that for dopamine (the nucleus accumbens), and because the ventral palladium takes its signals from the nucleus accumbens and the outputs from both these organs share some of the same neurological circuitry, it is very likely that in normal (drug-free) conditions we experience pleasure that is, to a degree at least, mediated by desire and hence by the Kantian equivalent of interest. Moreover, because the time taken for the output from the nucleus accumbens to reach the ventral palladium is very short (because they are so close to each other) the signals from both these organs could not be differentiated in time[100] in terms of our experience of them. Yet, as discussed earlier in this chapter, Kant insists that the intellectual element of the contemplative judgement of taste must come before the determination of desire. I claim that there simply isn't time for that to happen. Even if we experienced the intellectual element before it became mediated by a determination of desire, we would do so for only a few milliseconds and would not be able to distinguish it as a separate experience.

Such a claim is deeply problematic for the Kantian distinction between the sensuous pleasures of the imagination (that includes beauty and the aesthetic judgement) and the pleasures of sensation. The former has both a sensuous element and an intellectual one that precedes desire and does not involve an object. The latter is given by objects and therefore may involve desire, as for example, does delight in the agreeable which is experienced in relation to physical objects and delight in the good, which is reasoned in relation to mental objects. The focus of my interest is the (Kantian) beautiful and the judgement of tastes that are sensuous pleasures of the imagination and so cannot involve desire in relation to an object.

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[100] Humans cannot resolve experiences separated by less than about 150 milliseconds, which is a very much longer time than is required for dopamine mediated signals to reach the ventral palladium.

I claim that affective neuroscience obviously problematises the Kantian distinction between the beautiful on the one hand, and the agreeable and the good on the other. The agreeable refers to an object that is pathologically desired and the good to the object of pure desire that is the intellectual product of practical reason and imagination. In practice, I claim, we cannot discriminate in our experience between these different pleasures for three different reasons.

Firstly because, as discussed above, pleasure is, to a degree at least, mediated by desire in normal circumstances, though this link may be severed in exceptional circumstances which involve intervention to block dopamine receptors.

Secondly, because of the limitations of our ability to resolve events as separated in time, we are not able to distinguish, in our experience, the sequence of events in which pleasures and desires emerge into feelings in our awareness.

Thirdly, I claim that we cannot distinguish between the qualities of different pleasures. By this I mean that, as embodied feelings in us, pleasures arising from judgements of pure reason, practical reason and aesthetics all feel the same to us. This is because the response in our bodies that we call pleasure is the same in respect to different stimuli of the same class. There are, I claim, only two such classes: pleasurable stimuli and displeasurable ones. What I am claiming here is that affective experience has only two <u>forms</u>, and that we can make distinctions between these forms but not within them. Certainly, we can, and do attribute our experience within each of these two forms to our relations to different objects, but I am claiming that such predications onto objects are no more (and also no less) than explanations we make to ourselves about the feelings of pleasure and displeasure that we have had. We learn to construct these explanations socially, we learn them in discursive practices, but the feeling of pleasure as such is not <u>qualitatively</u> different for any of these explanations or indeed from the pleasure that we experience in constructing these explanations and discourses. In a sense pleasure as such has no history for us as we experience it. More precisely, it may have a history but we do not know it in the moment that we experience it, because it is not qualitatively differentiated according to origin. We might be able to differentiate it according to when we experience it, but as I have explained above, pleasure centres are located throughout the brain in areas that deal with what we have learned to call moral, social, cognitive, corporeal etc. functions. Pleasure signals are produced from all these areas very rapidly and appear to us to take place at the same time, and what

interests me, both as a student of visual art and of Kant, is the world of experience as we experience it.

I claim that my idea that pleasure does not reveal the origin in us from whence it came, that its history is not available to us through the quality of our experience of pleasure itself, is entirely consistent with Cabanac's theory of pleasure as the common currency for motivating and rewarding intentional action and as a means of resolving emotional conflicts. If, for example, we look at the money that we are carrying about with us we know its value as to quantity but not as to quality. The individual notes and coins only vary in respect of the magnitude of the value they denominate. We may know where the money was minted but that is not important to us. We may also know that we withdrew a certain amount of cash from a bank machine a few days previously but we also know that the money in hand did not all come from that source because it includes change from various purchases that we have made subsequently and we cannot distinguish which note or coin came from which shop. Moreover, we don't care. We have no idea of the particular history of a particular note or coin yet we know that it has passed through many hands and been involved in many transactions. Some of these may have been morally good actions and some entirely otherwise. Some of the things purchased by the money in the past may have been aesthetically pleasing or otherwise. We could write an entire novel about the life history of a single coin. Such a work might well be boring; it would certainly be entirely speculative and irrelevant to what we now decide to spend the money on. The money in our hand reveals nothing about its origin or the causal chain of events that preceded our possession of it. It also tells us nothing specific about the objects that we shall spend it on; though it places limits on these choices, they result from the quantity of money and not its quality. It only contains quantitative information.

So it is, I claim, with our reflections on the quality of pleasure. We cannot distinguish between feelings that result from, for example, ten percent pleasure in cognition or understanding, thirty percent moral concepts, thirty seven percent aesthetic judgement of taste, and twenty three percent corporeal desire, or from situations in which all, or some of these percentages are reversed. We would be able to make such distinctions if the pleasure we derive from particular judgements came "colour coded" or if the faculties of mind, when exercised individually (which, in neuroscientific terms they never are) or in combinations came to us with a specifying "bar-code" attached that could be read at some "check out" in the mind. I propose

that there is no colour code or bar-coding for pleasures arising from different judgements and faculties and all the checkout consists of is an old fashioned till that simply counts the money.[101]

There are several significant difficulties with this model in its application to decision making. As Cabanac has pointed out, we do not take decisions by simply choosing the action that we anticipate will provide us with the most pleasure; instead we choose to do what results in the maximisation of the algebraic sum of pleasure and displeasure. If we choose a particular action we take into account the displeasure that will result from the frustration of other actions that we might have taken, but which have been precluded by the action that we intend to take. For example, if we forego a choice to satisfy corporeal interest, we may obtain moral pleasure as a result. This moral pleasure may be slight in the moment of choice, but we can foresee that over time it will result in greater pleasure for others and for us too. We are acting to avoid future displeasure. The pleasure that is immediately the greatest does not always win out. A further complication is that pleasure and desire, in neuroscientific terms, are not wholly separable or autonomous for the reasons already discussed. I suggest that this is an advantage as well as a disadvantage, because a degree of specific objective interest within pleasure itself may be the means by which we relate pleasure to actions in respect to objects in the world. If all pleasures feel qualitatively the same, as we experience them within ourselves, we must have something to link pleasure to particular objective conditions in order to take action relevant to those same conditions. This may be the function of desire in decision-making. I refer here to the lower rather than to the higher form of this Kantian faculty of mind. That is to say, I refer to corporeal desire or gratification rather than to pure desire in the exercise of reason.

A further important point emerges from what I claim is the qualitative commonality of pleasure that results from the exercise of judgements that involve different faculties of mind. My point here is that is precisely because the qualitative aspect of these pleasures is the same for us in experience that we are able to re-predicate pleasure

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[101] I do not suggest that we are not at all interested in the political, social and economic conditions (the means of production) in which goods and services are produced, but simply that information about these matters is not given in the object that is money itself.

from one faculty of mind (that I regard as a mental object[102] of reason) and imagination) onto another mental object (faculty). Additionally, this goes some way to explaining how it is that we can re-assign the pleasure felt in the presentation of a particular real object in the world to one faculty of mind to another faculty of mind as well.

For example we experience pleasure in the mere cognition and recognition of all objects; and let us suppose that we cognise a group of identical cookie jars on a shelf. The affective result is that of cognition that we experience in all objects. Through the process of aesthetic education and the productions of Andy Warhol we can also come to refer these same cookie jars to our faculty of aesthetic feeling and judgement. The result is that our pleasure is still predicated on the cookie jars but is greatly increased in magnitude.[103] We are not aware of feeling two distinct kinds of pleasure simultaneously. The pleasures in the different judgements are complementary rather than competitive. A more general example is the ease with which we re-predicate the pleasure that we take in natural objects onto art objects. We experience pleasure in the beauty of our fellow humans. Presumably this predication has evolved for reasons connected with reproduction and the production of healthy offspring, yet we also take pleasure in paintings of beautiful people and even in paintings that are not figurative at all and have no direct connection to reproduction. This pleasure that we take may be explicable in terms of similarities of spatio-temporal form or colour as form between all these objects and I shall return to that a little later. An alternative explanation is that pleasure actually is the formal quality common to all experience that enables these endless re-predications that we make.

This suggests that the pleasure as form felt by us in the presentation of objects that are directly relevant to homeostasis is qualitatively the same as the pleasure we take in objects that are not. It would serve no obvious natural purpose for it to be different, and would make learning as re-predication onto different objects more

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[102] My point is that it is all too easy to reify the products of our imagination and thus regard them as really existent discrete objects; we get so used to the autonomous Kantian faculties of mind that we forget their contingency on just those operations of mind that they explain.

[103] Some of the increased pleasure may result from the fact that we are, in looking at an array of cookie jars, experiencing the pleasures not only of cognition and presentation, as would be the case for a single cookie jar, but of recognition and representation provided by repetition. In Kantian terms we should not judge *an array of objects beautiful because beauty is always singular*. Again, *affective quality of* experience is being changed by quantity, this time being increased rather than decreased as in Panksepp's experiments, described earlier.

difficult. If pleasure is to be the common currency of motivation, intentional action and reward for homeostatic enhancement it needs to be able to be assign value to the complete range of possible actions. There is no advantage and only disadvantage to having different currencies circulating within an economy at the same time. Yet pleasure needs to have some specific connection to objects, especially if the quality of pleasure is the same for all objective experience. Without an objective moment to pleasure we could not discern which of the objects in perception were pleasurable and this supports the point made earlier that it is the function of desire to provide that specific objective moment for all pleasure. The fact that the ventral palladium receives the output of the nucleus accumbens, that pleasure is always constituted, to a degree, by desire appears to support that view because desire is objectively interested and specific.

Because Kant uses the term form in an ambiguous and sometimes aporetic way it is appropriate to temporarily suspend the main discussion here in order to explain my own use of that word. Broadly, I have followed Kant's usage as my thesis has moved from one Kantian topic to another. Thus, in Chapter Two I use the word in the way that Kant does in his First Critique: form is restricted to meaning the pure a priori intuitions of space and time that enable and order phenomenal objects of sense for us. Such form, for Kant, is not derived by abstraction from matter. Kant describes this type of form as "form of sense" and contrasts it to the "forms of understanding" which relate to objects of thought; these two types of Kantian form together make possible synthetic knowledge.

In the Second Critique Kantian form refers to the universal form of moral law in so far as it is suitable as the determining ground for free will: it is only the form of an action that has moral significance and not the desired material ends to which the action is directed. This meaning of Kantian form is relevant to this thesis because the Kantian (moral) judgement of practical reason shares its form with his aesthetic judgement.

In his Third Critique Kant attempts to resolve the oppositional relation between form and matter that is apparent in his previous work described above. Kant's strategy, described in Chapter Three is to bring form and matter closer together through his use of proportionality or ratio between understanding (the determination of matter under concept) and the imagination (the determinable in general). In the Critique of Judgement form, as the quality of the aesthetic judgement of taste, remains

abstracted from matter just as it did in the moral context of the Second Critique. Kant claims that aesthetic quality is independent of the matter of the art object and consists only in its pure finality of form. Yet, as Caygill (1995, p204) points out, Kant claims in another passage of the same Critique that this pure finality of form can only be revealed by means of contrasting it with the "charm" or the matter of a judgement of taste. This aporia exemplifies the crux of the problem of Kantian form, which Caygill lucidly summarises in his statement that form and matter must be mutually implicated since form, as determination, is meaningless without matter to be determined. As Caygill goes on to write,

> *this opposition is analogously played out in Kant's texts as form as purity, matter as impurity; form as universality, matter as particularity, form as identity, matter as difference; and even form as subject and matter as object.*
>
> (1995, p204)

Throughout my thesis I have referred to correlated dichotomies such as those between autonomy and heteronomy; freedom and necessity; consensual agreement and self-interest; ipseity and alterity, and so on, but common to all these binary oppositions is the failure of modernism to acknowledge that autonomous rather than relational entities are a consequence of a chosen ideological position.

Form is particularly important to these last chapters of my text because in them I choose a different position, and thus move away from the traditional opposition between form and matter. Kant refers form to a finite, noumenal human subject though he certainly recognises the importance of that subject's social and moral feelings and obligations. I want to emphasise that social role by referring to a subject that does not simply engage in relations with other people and the world but is constituted by, and in turn constitutes, those relations. Such a view of the human is exemplified by the reflexive and recursive nature of the dynamical operations of perception described in the positivist-pragmatist model of neuroscience described earlier.

An important aspect of my thesis is the idea that the social macro-scale activities of people, the meso-scale dynamical relations between the brain and the body and the world, together with the micro-scale intra-brain activities within individuals all share the same reflexive and recursive dynamical form. Form, albeit of a different nature to Kantian form, is a very important concept for me, as it was for Kant. My turn to neuroscience in Chapter Four, to find a discipline that is largely extraneous to Kantian philosophy in order to critique it, has had the significant result of undermining

the traditional opposition between form and matter. That is because the origin of the reflexive and recursive form of the dynamical operations of the embodied brain that neuroscience correlates to mind, is abstracted from matter. More accurately, it is abstracted not from discrete material entities but from the dynamical relations between non-discrete entities. Such a form is not wholly immaterial because its ground involves dynamical relations between material objects that are the brain, the body and the world. I do not claim in this thesis that the mind is the brain but only that what we designate discursively as mind has a correlate in the relation between the three semantic entities of the brain, body and world in relation. Similarly, when I employ my extended theory of beauty as pleasure (based on Cabanac's economic model of intentional actions) I write of pleasure and displeasure as qualitatively independent of the specific mental and physical actions that they motivate and reward; pleasure becomes the common currency and pathway of all intentional actions.

That looks like a very formal theory of pleasure, but it is not formal in the traditional sense because I do not mean to imply that pleasure and displeasure as form are wholly abstracted from either mental or material objects or actions. Rather, I see pleasure and displeasure as a common space or field of feeling that motivates and rewards all of these but is not qualitatively specified by either mental or material objects alone. The form that I describe here is both mental and material in origin because it stands in relation to both the mental and material natures of humanity, mediating one with the other. Thus beauty as pleasure becomes the means of bringing phenomena and noumena together in the human.

The major problem with using the positivist-pragmatist model of neuroscience to critique the general Kantian system of the taxonomy of pleasure, autonomous faculties of mind (ultimately based on the autonomous categories) and autonomous forms of judgement is that the former is based in reflexive operations between non-discrete entities within a self-organising system and the latter deals in linear causality, discrete entities, and autonomous judgements. There will always be difficulties in terms of compatibility and commensurability between the two systems. But, in a sense, that is the point of using neuroscience to critique Kantian aesthetics; it is within the locus of such difficulties that creative insights and partial solutions occur. No claim is made here that neuroscience is somehow more objectively truthful (whatever that may mean) than Kantian introspection, or the converse. However, they are distinguishable narratives, even meta-narratives, within which the

nature of beauty may be considered. They are not wholly distinct because Kantian thought, particularly in respect to its self-criticality, has been influenced by what are now termed classical scientific ideas. Neuroscience in turn, indeed all science, has been strongly influenced by the Kantian systematic method; it still deals within the terms of cognition, reason, affective feelings etc in a systematic way that carries traces of Kantian thought, though sometimes it tries quite hard not to.

Returning now to the relationship between Kant's treatment of pleasure as beauty and aesthetical judgement in his Analytic of The Beautiful, and comparing it to certain conclusions drawn from affective neuroscience, we have already seen that, in term of the latter, the Kantian absolute distinction between the beautiful, the agreeable, and the good cannot be sustained for the reasons given above. In broad terms, it is fair to say that the positivist- pragmatist view supports the Kantian claim that beauty, as pleasure, is not given in sensation by objects but is a feeling within us that is apart from objective interest. Against that conclusion, is the fact that contemporary affective neuroscience research demonstrates that pleasure and objective desire are not wholly autonomous because they share, in part, the same neurological circuitry and the part of the output of the dopamine-based desire production in the brain feeds into the opioid-based main pleasure producing centre. I think it is fair to conclude that neuroscience supports the Kantian view that beauty is largely apart from objective interest with the proviso that beauty contains within itself an objective moment mediated in terms of interest.[104] Such a conclusion is very much within the neo-Kantian paradigm that Adorno constructs and which was mentioned briefly in Chapter Three. Indeed in those terms, the objective moment of beauty is necessary for beauty to maintain a degree of autonomy from objective interest.

Questions remain as to whether or not affective neuroscience, particularly in the context of the positivist-pragmatic model, support or contest the Kantian claim that beauty and the judgement of taste are subjectively universal, exhibit purposiveness without purpose, and are subjectively necessary without reference to a particular concept. These are the matters that Kant examines at length in his Arguments of The Deduction in the Third Critique when he returns to his discussion of the beautiful after a long detour into the notion of the sublime, though they also begin to emerge within the Analytic of The Beautiful. Because I have discussed them in Chapter

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[104] That is to say an objective moment that is "tinged" with desire and not simply given by objects as sensation.

Three, I shall not do so again here, but simply comment on them from the point of view of positivist-pragmatist neuroscience.

There is a general difficulty involved in any detailed comparison, on a point-by-point basis, between the Kantian arguments in both his Analytic and Deduction and the conclusions of affective neuroscience. This is because the systematic structure of Kantian argumentation that is made in terms of autonomous categories, faculties of mind and judgements, is not reflected in the discourse of neuroscience which proceeds on the basis of non-linear causality, and reflexive operational dynamics between organs of the brain that are far from autonomous from each other. Technical arguments in one paradigm are often not directly translatable and able to carry meaning into the other. There are, in other words, problems of commensurability between the two paradigms in which technical arguments proceed within the context of significantly different methodologies and disciplinary concerns. For these reasons I do not give a point-by-point discussion of Kant's text in relation to neuroscience at the micro level of argumentation. Instead, I look to the general concerns and motivations of Kant's text on beauty and compare it to the general conclusions of the positivist-pragmatist model of neuroscience. Broadly, therefore, my comparison proceeds at the level of intent because I believe that this is where the similarities and differences most clearly appear.

Firstly, I ask if Kant's claim that beauty and taste are subjectively universal is supported by affective neuroscience. Kant's interest here is to establish his idea of common sense (sensus communis) as the a priori, hence subjective, principle of the judgement of taste, that ensures the universality of our ability to respond to the beautiful. Underlying this interest in universality, for Kant, is the need for our response to the beautiful to be universally communicable between people. Kant has already established, in the First Critique, this universal communicability for objective cognition, and via his supposition of an optimum ratio between the elements of imagination and understanding both for cognition of objects and for an estimation of beauty, developed in the Third Critique, he links the aesthetic to the cognitive judgement and "borrows" the universal communicability of the former for the latter. The problems that this move creates have already been discussed in Chapter Three. Kant also needs universal communicability in the judgement of taste if he is to symbolically and analogically link it to his moral philosophy that rests upon reasoned consensual agreement for the common interest and not merely individual self-interest. He needs his faculties of mind to work harmoniously together for the good

of the organism that is the individual and he needs individuals to work in the same way for their common (moral) good. For both these reasons he needs communicability that is both intra- and inter-subjective. Neuroscience has a similar pre-occupation with intra-subjective communicability, and has some, though less, interest in the latter.[105] Affective neuroscience sees the role of pleasure and displeasure as crucial to the resolution of different motivations that arise from the operations within the brain that broadly correlate to the operations of the Kantian faculties. Pleasure, in the positivist-pragmatist model of neuroscience, is the common currency of decision making and is the inducement and the reward for behaviours that enhance homeostasis: a concept not unlike that contained in proposition 29 of the Critique of judgement cited earlier in this chapter,

> *For, of itself alone, the mind is all life* (the life principle itself), *and the hindrance or furtherance of it has to be sought outside it, and yet within human beings themselves, consequently in connection with the body."*

Kant is taking a view of the purpose of mind that is very close to the homeostatic view of the purpose of brain. Feelings of pleasure are indispensable for both paradigms.

We saw in Chapter Four that Freeman (1999b) regarded feelings as ultimately private and solipsistic in contrast to emotions that are immediately public. This looks like a negation of my claim that affective neuroscience supports the universal communicability of Kantian beauty and aesthetic taste as feelings in us. By the term feelings, Freeman means that which we experience in the mind as emotions mediated by our entire life history, culture, memories etc. Such highly individual experience is not easily, or perhaps even ultimately, communicable to others. On the other hand, he strongly supports the idea that our immediate emotions and our emerging intentional actions are communicable. The distinction here is between the very beginning and the end of the gestalt process that builds emotions into feelings. Where the line is drawn between emotions and feelings is arbitrary within a process that is a continuum. It is true to say, however, that neuroscience considers inter-subjective communications in general at a level below the Kantian level of discursive practice leading to consensual agreement. Neuroscience, including Freeman's writings, agrees that the basic emotions of approach or aversion, that imply a general

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[105] As evidenced by the currently developing interest in neuroscience applied to social psychology. There is current interest (J Banfield and A van der Lugt) in these matters at the University of Magdeburg, Germany, and at Dartmouth College, NH, USA. This research is in progress and at the time of writing no papers have yet been published on the affective responses of two or more subjects in conversation.

feeling of pleasure or displeasure are immediately apparent to others as changes in our embodiment, as actions such as facial expression, postural changes etc. These are powerful means of communication that apply across language and even species barriers in an immediate way that spoken or written communication does not. They are far less ambiguous and more trustworthy than words as indicators of basic emotions. Kant claims that both ordinary cognition and the aesthetic judgement rest upon the same unique conditions.[106] Neuroscience claims that these conditions, the spatio-temporal encoding of all sense input and its mediation in terms of pleasure/displeasure are common to all subjects and inform all mental activities. I claim that neuroscience does, on balance, support the Kantian idea that the feeling of pleasure in beauty is, via the instantly public nature of emotion, universally communicable to others.

Kant claims that beauty in both nature and art is seen by us to be purposive but without purpose in the sense that it appears to be made for a purpose, which is conceptually and necessarily unavailable to us. This is equivalent to claiming that beauty has finitude, it is complete in itself, but has no end. In the particular case of art, Kant claims that the artwork may have some purpose involved in its production only and that knowledge of such purpose is insufficient for us to determine the object as beautiful, though it may, coincidentally be so. Kant relates purposiveness to the intentionality of the artist, yet there is more at stake than that, because for Kant, purposiveness as such is the explanation of our feeling of pleasure in aesthetic judgement. This claim is based on the argument that the achievement of any purpose is pleasurable and, in the absence of any knowable concept of purpose it is purposiveness, through it's *as if* relation to purpose, that provides pleasure for us. The two basic demonstrations that Kant gives to support this claim rely on the aesthetical and cognitive judgements sharing the same unique a priori conditions once again and we return to the argument Kant made in the previous section (that rested upon his concept of common sense as sensus communis) that the former therefore enjoys the same universal communicability as the latter, and therefore act in harmony in their relation or proportion to each other.

What does neuroscience make of all this? Neuroscience is not really interested in the purposiveness of pleasure because it has a very clear idea of the ultimate

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[106] As discussed in Chapter Three as the standard objection to Kant that refers to the necessary conditions for cognition being the sufficient ones from aesthetic judgement.

purpose of pleasure: the means the body employs for enhancing homeostasis and as the reward[107] for doing just that. Neuroscience is not faced with the problem of harmonising the cognitive faculties of imagination and understanding to produce pleasure because it regards pleasure and displeasure as indispensable to the operations of all mental activities rather than the result of some proportion or ratio between them. Within affective neuroscience pleasure is the optimising agent in the operations of all actions, mental or physical rather than the consequence of proportional activity between (mental) actions. It is true that pleasure acts also as a reward for activity that has homeostatic utility, but that is to refer pleasure to the body as a whole in its relation to the world rather than to particular mental activities or some ratio between them. This is a fundamentally different standpoint from which to consider pleasure compared to that of Kant. It might be argued, that pleasure as the common currency of all intentional action and as the means of resolving conflicting motivations, mental or physical, displays purposiveness rather than purpose because pleasure, like money, has no specific objective end. That is only true in the somewhat paradoxical sense that pleasure has no specific objective end because it is relevant to all ends. I do not accept the view that the plurality of all ends excludes from within itself singular objective ends. I cannot see how neuroscience can be enlisted to support the Kantian argument for beauty as purposive without purpose. Although I recognise the ingenuity of Kant's argument here, I also sense that he is in some difficulty with this part of his Deduction; it is more than usually aporetic and contradictory, and I am prepared to exclude it from my own conditions for beauty.

This brings me to the last point for consideration, which is that, for Kant, beauty and the judgement of taste are subjectively necessary (lie a priori in us) without reference to a particular concept. In making this claim, Kant is talking about necessity as a modal concept, he is referring to the manner or form of the judgement itself rather than to its content. That is to say, he is claiming that the aesthetic judgement behaves *as if* it were conditioned by an a priori principle. Kant therefore claims that the aesthetic judgement is singular (as I have discussed previously) and is *exemplary*. He also claims the aesthetic judgement is conditional on the subjective a priori principle of taste which Kant claims is common sense as sensus communis. We are back to common sense again and it is difficult to see how the claim for the

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[107] Neuroscience is not concerned with the Kantian view that the expectation of reward or punishment is not a proper motivation for disinterested action. This moral view finds its aesthetic analogue in Kant's theory of beauty as purposiveness without purpose. I align my theory of beauty with the neuroscientific view here, for reasons already mentioned and dealt with again a little later in this chapter.

subjective necessity of the aesthetic judgement adds very much to the appeal to universality through inter-subjective common sense made earlier. Here Kant is referring the claim for the universal communicability of the judgement of taste back to the claims made for the cognitive faculties in the First Critique; that is to say his ultimate legitimation for the claims he makes for the universality of the judgement of taste is to the transcendental subject that, as Burnham (2000, p58) remarks, makes possible *a common world about which all humans can think and speak.*

I suggest that, inasmuch as neuroscience has any bearing on the Kantian claim for the existence of a hidden subjective a priori principle for the universal communicability of the judgement of taste, or for the mysterious optimum ratio and thus harmony within our cognitive faculties and the judgement of taste, it is to be found in the self-organising and reflexive dynamical operations of the human brain.

A replacement for the transcendental subject: neuroscience and universality

I suggest that the neurological dynamics of brain provide a more epistemically useful alternative with which to explain "the common world about which we all can think and speak", than do the Kantian transcendental subject and the supersensible substrate of humanity and phenomena. I propose therefore, that we may dispense with the supersensible substrate and the transcendental subject as the ground for subjective universality in beauty and aesthetic theory. I am not proposing that we dispense with the idea of subjective universality as such, because all that I am doing is choosing a different ground for that claim. However, that choice has implications; if it had not, there would be little point in making it.

We still need subjective universality for many, but not all, of the reasons that Kant needed it. Universality is important because it allows us to have the possibility of empathy for other people and an experience of a common world of thinking and feeling, by which I mean a world, in our experience of it, that has the same basic experiential structure for us all, though is not exactly the same in its experiential form and content for each individual who lives in it. If we have this sort of world in common we have the possibility for meaningful communication of our thoughts and feelings to others and hence for relationships mediated by both self-interest and the wider social interest; we have the possibility for a moral social order.

All this sounds very much like the Kantian ambition for our relationship to the world of phenomena and noumena, and it is; the nature of beauty that follows from the positivist-pragmatist model of the dynamical operations of our brains may be compatible with Kant's (and my own) general moral motivations and be of a very formal nature, but here the similarity ends. The crucial differences arise because the formal nature of the neurological model to which I appeal is qualitatively very different to the formal (modal) arguments that Kant makes in establishing his conditions for beauty and the judgement of taste.

The Kantian conditions for beauty and the aesthetic judgement are constructed in terms of autonomous faculties of mind that interact within the terms of a logical entailment that is based on linear causality between the discrete (because wholly autonomous) mental objects that are judgements according to the operations of the different faculties of mind. These faculties are themselves divided into legislative (higher) and non-legislative (lower) parts. This hierarchical, linear and formal structure was both Kant's philosophical inheritance and social conditioning from the emerging modernism of the world in which he lived. At the same time, Kant did much to strengthen and secure this tradition; he was both the product and the creator of modernism.

The formal structure of the positivist-pragmatist model of the operations of the brain and its correlation with mind is based on observations of the reflexive interactions between different organs that are not autonomous from each other and have very little meaning other than in their interdependent relation with each other. Moreover the brain itself cannot be considered other than in relation to the whole body, including brain, which in turn is in a constant reflexive perceptual relation between itself and the "objective" conditions and dynamical form of the world beyond its own boundaries. Indeed, the idea of boundaries between the brain, the body and the world is subsumed by all these intra- and inter- reflexive dynamics, none of which are reducible to linear or even circular notions of causal relations between discrete objects, whether physical or mental. I have placed the word objective in parentheses above because the Cartesian dichotomy between subject and object becomes deeply problematic within each and all of the reflexive systems that we call the brain, the body and the world. Part of Kant's project was to contest or even to refute Descartes, but the reflexive dynamics that I have described above, push that process much further.

It is interesting to note that the account of the reflexive, dynamical operations of the brain furnished by the positivist-pragmatist theories of affective neuroscience are supportive of, and supported by, the research by many authorities interested in the dynamics of what is commonly referred to as the *fold*. By this I mean the basic concept that informs the post-modern discursive practices concerned with ipseity and alterity in the understanding of the self, the dynamics of the transition from pre-noetic to noetic perception, and all the similar embodied dynamical correlates that we use to describe our daily activities. Most notably relevant here is the work of Francisco Varela and Natalie Depraz (2000).

The appeal to the reflexive nature of brain, body and world as the ground for, and the field within which, human experience is played out, may appear, in terms of its generality, somewhat similar to Kant's idea of supersensible substrate that I have criticised in this thesis. As we have seen before, the supersensible substrate is, even in Kantian terms, epistemically opaque; we cannot access experience and knowledge about it. On the other hand, the dynamical operations of the brain described by neuroscience offer an explanation for all our perceptions of the phenomenal world including ourselves as phenomena. I am not yet convinced that neuroscience will do the same for us as noumena, but neither do I rule it out for the future.

Turning now from these general considerations to the specific implications of positivist-pragmatic neuroscience for Kantian taste, it is immediately apparent that Kant's claim that beauty is apart from concept and the judgement of taste does not involve objective considerations of the object of the judgement are incompatible with this neurological model of affect. There are several specific reasons for this. Firstly, as we have seen in this chapter, pleasure is never, in normal circumstances, free from conditioning by objective interest as corporeal desire. The opioid-based pleasure circuits are shared, to a degree, with the dopamine output from the nucleus accumbens. Secondly, output from all the brain locations that broadly correspond to the Kantian faculties of mind, happens for us, not as a series of sequential events, but as a continuum of pleasure/displeasure experience. Thirdly, all pleasure, from whatever part of the brain it might be considered to originate, feels the same to us in our embodied experiences that we call feelings; we cannot distinguish, in the moment, how much of the pleasure that we are feeling comes from any particular faculty of mind or its Kantian sub-divisions. Pleasure is the same currency for the entire economy of the brain. For example, we cannot ever know from the quality and

quantity of pleasure that we feel, that it results from a proper Kantian aesthetic judgement; we do not know that our pleasure is in beauty alone, uncontaminated by the agreeable or the good, and that it results only from an aesthetic judgement of taste.

For the same reasons we cannot make, within the neuroscientific paradigm, a meaningful distinction between purposiveness and purpose. In that paradigm all pleasure is experienced as purposive, not just pleasure in what Kant calls aesthetic judgement, and all pleasure (and displeasure) is ultimately for the same purpose: the enhancement of homeostatic well being. Within the neuroscientific discourse, there is no antinomy of taste to be resolved.

None of the foregoing remarks render the Kantian theory of beauty and taste useless or irrelevant. On the contrary, I claim that they enrich it because they re-define it in terms that are more relevant to our pluralistic contemporary world. They are not so culturally and politically embedded in modernism and yet they permit a modernist moment. What they do not permit is the domination of beauty by the hierarchical and autonomous structure of modernist thought. The Kantian conditions for beauty are still of enormous value, but now as desirable traits within artistic practice and not as determining conditions for beauty in such practices. The parallels between this conclusion and my critique of Greenberg in the first chapter of this thesis now emerge and will be discussed in the next chapter.

Form and the re-predication of pleasure onto new objects

Before concluding this chapter, I want to briefly discuss an aspect of Kant's theory of beauty that does carry over into the neuroscientific theory that I have developed and which brings the two approaches into close proximity: the importance of our experience of pleasure in spatial form. Affective neuroscience has long been interested in the small areas around the brainstem that deal with spatio-temporal encoding of sensation and the formation of pleasure and desire. Because of the very close proximity of these two functional structures and the known interdependent nature of organs within the brain it was reasonable to suppose that these two fundamental activities mediated each other. The combination of spatio-temporal encoding and the production of pleasure at the same time might account for our liking for form. Such a view was supported by some early ethological work on vertebrates. Two examples of that work are discussed briefly below because they are relevant to

the emergence of the recognition of the crucial importance of form in affective responses.

Ramachandran & Hirstein (1999, p18) describe an experiment in animal discrimination learning. Rats are individually taught to discriminate between a square button and rectangular one (with an aspect ratio of, say 3:2) by being rewarded with food for pushing the latter. They very quickly learn to respond to the rectangle with an above chance frequency compared to their response to the square. If another rectangle with an aspect ratio of say 2:1 (one with greater "rectangularity") is introduced into the experiment, a rat will respond to this new rectangle significantly more frequently than to the previous one. Each time the aspect ratio is increased the rats respond positively to that increase, showing little interest in rectangles of lesser aspect ratio. Ramachandran claims that because the rats' responses to rectangles of increased aspect ratio is significantly greater than their response to the original rectangle, on which they were trained, the rats are not learning a prototype but a rule: rectangularity. Such a rule is, of course, a formal one.

A possible objection to the above conclusion is that the learning of a rule may be linked to the pleasure experienced in the activities of recognition and representation. Thus Ramachandran's and Hirstien's experiments do not necessarily link learning a rule to exaggerated form alone. My own position here is that pleasure is experienced in both exaggerated form and in recognition and representation. Further research to establish the relative importance of the different factors involved would be useful.

In a different experiment, Tinbergen (1954) reported observations on the chicks of a species of seagull. The adult females of that species have a small red spot on their beaks and, in their natural surroundings, the chicks peck at their mothers' beaks to obtain food. Tinbergen found that the chicks exhibited the same response when presented with an entire dead female seagull, just the head of a female seagull, or even a stick with a dot of red paint on it of about the same size as the dot on female seagulls' beaks. The response activity of the chicks increased significantly when presented with a stick with two such painted dots, and even more so with exposure to a stick with three red dots.

Both of these experiments illustrate what Ramachandran calls the peak shift effect: the observed tendency of animals to not only predicate their pleasure responses on to form (whether spatio-temporal or form as colour) rather than on the learning

prototype itself, but to experience more pleasure from exaggerated formal qualities compared to the form of the original stimulus. Ramachandran therefore argues that this peak shift effect is a key principle[108] for understanding what he calls the evocativeness (in neurological terms the affective competence as a stimulus) of art. He does not claim that this is the only such principle for affectively competent art, but simply that it is an important one. He goes on to conclude that all such affective art has about it something of the nature of caricature: the suppression, to a degree, of what is general or average to the class of the object represented and the exaggeration of the particular qualities of a specific object. He does not confine this conclusion to the caricatures of faces of tourists produced by pavement artists, but claims it applies to all art.

Although Ramachandran reports on observations of animal behaviour that correlate exaggerated formal qualities of objects with the re-predication of pleasure responses onto such objects, he does not offer an explanation, in homeostatic terms, of why exaggeration of form is so important. At this point, I want to advance my own narrative as a possible explanation for the behaviour patterns of animals described above.

Animals need some incentive, some prospect of increased pleasure, to re-predicate their feelings of pleasure from a prototypical stimulus onto a new stimulus, for otherwise they would not do the work of learning and would remain satisfied with the prototypical stimulus. This implies that we need some difference (some alterity) in the new object from the old one, in order to stimulate in us some expectation of positive difference (as to quantity) of the pleasure we shall experience. Without such expectation we would not use resources to learn and be curious about the world. Such learning and curiosity has obvious homeostatic advantages; on the other hand, it has potential dangers too, if the process is simply random. It is, I suggest, the formal sameness (as to quality) between the prototype and the new that provides a degree of homeostatic safety in our re-predication learning.

Exaggeration of form has the possibility of providing ipseity (as to quality) and thus safety, and also alterity (as to quantity) and thus difference, and hence motivation to change. I suggest that our ability to generate formal ideas in response to natural objective stimuli has both evolved and been culturally learned and that we have

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[108] I also acknowledge my own direct interest, as an artist who is trying to make beautiful paintings through strongly emphasising spatial form, in supporting his thesis!

carried that ability over into our response to art objects. Our ability to exercise aesthetic taste at the level of sensation may well be ultimately and intimately connected to our ability to exercise taste at the level of sensation, which even the simplest organisms possess for very good homeostatic reasons.

I acknowledge the value of Ramachandran's thesis, especially his emphasis on spatio-temporal form as an important constituent of pleasurable response to an object, as the experience of beauty in art. However, I do have some reservations about the experimental grounds for his conclusions.

Firstly, Ramachandran's thesis is supported only by behavioural observations, and I would like to see direct neurological confirmation of the brain dynamics of the animals involved in these experiments in addition to reports on their behaviour. Apart from the general consideration that direct neurological evidence is always useful to avoid possible tautological outcomes in behavioural studies alone, such studies might well be able to quantify the roles of opioid and dopamine centres in experimental subjects. That sort of information is useful in estimating the relative roles of pleasure and desire in the observed behaviour. Despite the fact that the positivist-pragmatist model of affective neuroscience appears to lessen the absolute importance of this (Kantian) distinction, it has by no means rendered it irrelevant. That is because knowledge of the relative importance of pleasure and desire allow us to estimate the relative roles of the subject and the object in affective experience, and that is potentially useful to practicing artists.

Secondly, Ramachandran's claim that our experience of beauty is related to formal exaggeration seems, to me, a little problematic in strictly Kantian terms. For Kant the sublime has aspects of the awesome or overwhelming, sometimes because of sheer magnitude. The Kantian sublime also has about it the qualities of counter-purposiveness, outrage, something of the other combined with the familiar sameness of everyday experience. It is, in this sense, something to do with ipseity uncomfortably combined with alterity. There is, I suggest, something of this feeling about seagull chicks pecking frantically at a wooden stick with three red dots on it, or rats repeatedly pushing at a rectangle that does not give them food. There is a degree of unease, even pain, in contemplating these events, that for me, resonates with the Kantian sublime. The question arises therefore, as to whether the response of these animals is more appropriately described by the idea of the aesthetic response to the sublime rather than to the beautiful. Perhaps it does not matter very

much because neuroscience has, as described above, subsumed the Kantian distinction between the sublime and the beautiful inasmuch as affective neuroscience allows beauty a conceptual moment in relation to objects. Additionally the experience of awe (or any other emotion) directly related to magnitude (that lies at the heart of the Kantian sublime) is conceptual and objective because it is ultimately a mathematical concept that involves objects. Neuroscience does not appear to distinguish between the beautiful and the sublime, and if it did, one suspects it would not amount to an absolute distinction. Nevertheless, I suggest that any future experiments that are devised to investigate Ramachandran's peak shift hypothesis, might usefully bear in mind the Kantian difference between the beautiful and the sublime.

For all the reasons described above, I claim that Ramachandran's hypothesis, that all affective art is not only constituted by formal qualities but is even more affective if it exaggerates these qualities, is an indicative support to my own ideas of the importance of form to beauty, rather than a demonstration of their validity for us in the experience of art.

In the next chapter, I draw out my general conclusions for the implications of my critique of Kantian aesthetics in terms of contemporary neuroscience for Greenberg's conditions for the autonomy and quality of painting in modernism. I also discuss the implications of affective neuroscience for my own painting practice and for Kantian aesthetics in general. The inter-dependent nature of the brain in regard to its own internal dynamical operation and its external relations to the world pose problems for the notion of absolute autonomy in general and the autonomy of both particular art practices and for the idea of art as a discursive practice that is able to sustain its own domain of autonomy; these issues will also be addressed.

CHAPTER SIX
A NEW ROLE FOR BEAUTY

reflections

I begin this chapter by revisiting the subject matter of Chapters Two and Three. The former questions Greenberg's claim to Kantian authority and the latter examines that authority insofar as it explores some of the difficulties that arise within the Kantian paradigm. Both of these chapters critique their authors from a position within modernism.

Chapter Four, which reviews the contemporary discipline of neuroscience, marks a shift to a post-modernist critical positioning and begins the critique of neuroscience itself. Its aim is not only to summarise the cognitivist-passivist and the positivist-pragmatist theories that inform this new discipline, but also to critique the former and older tradition that has its roots in modernism from the standpoint of the latter, which emerged within a post-modernist culture. In Chapter Four I establish my own position within neuroscience as lying broadly within the positivist-pragmatist model. However, I take care not to devalue the importance of the cognitivist approach or to entirely dirempt my own positioning from it; to do so would be to ignore a central tenet of this thesis: that which is to sustain its own ipseity must include within itself a moment of alterity. I have drawn this conclusion primarily from Kant himself whose critical methodology developed in his First Critique relies on his use of experience to limit what he regards as the excesses of logical entailment, which result in the speculative dogmatism of metaphysics. I have also followed Kant's methodology in his epistemic revolution, discussed in Chapter Two, which analogously appeals to Copernican cosmology, which proposed a then revolutionary scientific model of the phenomenal world. In this thesis I have tried to do something similar; I have tried to critique established Kantian aesthetics through an appeal to the science of my day, a science that also confronts us with a revolutionary view of our feeling selves as phenomena.[109] I do not expect the ghost of Kant that haunts this thesis to approve of my conclusions, challenging as they are for his taxonomy of beauty as disinterested pleasure, the autonomy of his aesthetic judgement and his idea of the supersensible substrate that includes the transcendental subject. Yet perhaps his

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[109] Neuroscience may eventually influence how we regard ourselves as noumena.

spectre would not take issue with my general ambition and methodological appeal to the science of my own times that I have made.

In Chapter Five I turn from neuroscience in general to affective neuroscience in particular together with its implications for a contemporary notion of beauty as pleasure, though not as entirely disinterested pleasure. The ways in which neuroscience supports and contests Kantian aesthetics are addressed in some detail in Chapter Five and these technical arguments will not be repeated here. In this chapter I want to step back from such details and look at the broader landscape of the relation between Kant and contemporary affective neuroscience. At the same time I suggest that affective neuroscience may usefully learn a great deal from Kant's critical project because neuroscience, just like any other discursive practice, needs to look beyond itself to establish its own self-criticality and limitations; and where better to look than to Kant's genius for operating at the extreme edge of his discourse yet remaining part of it? It is not, I suggest, that Kant's specific conclusions are of particular use to neuroscience, but rather that his motivations and his ability to reframe old and intractable difficulties into new and more creatively useful questions that are still relevant. Many of the scientific authorities cited in this thesis, notably Freeman, Damasio and Churchland have considerable interest in philosophy, including the philosophy of the Enlightenment, and that has been very useful to me because it has helped to establish limits on the remit of their theories.

I began my research for this thesis with a detailed study of Greenberg's essay Modernist Painting because of its direct relevance to my painting practice, which was, and still is, based on my interest in pictorial space, surface quality and form. Most of my friends who were painters were very dismissive of Greenberg's work; it curtailed their freedom as artists, it was modernist, so how could it be relevant to our post-modernist world? Nobody was interested in Greenberg any more. I understood and sympathised only with the first of these objections. I sensed that somehow Greenberg had gone too far yet I could not identify quite where this had happened in his argumentation; I felt that he could not be dismissed so quickly because his arguments seemed so compelling. I read the established critiques of Greenberg and was especially influenced by the work of Rosalind Krauss, Michael Fried and Thierry de Duve. These authorities frame their critique of Greenberg within a wider critique of modernism as a political, economic, cultural and historical moment, in terms of its consequences for art as a discursive practice, or (in the case of de Duve) in terms of a re-inscription of the Kantian resolution of the antinomy of taste; that is to say, in

terms of the content of Kant's Third Critique. My own approach has been somewhat different because I wanted to look at Greenberg's work in terms of the legitimacy or otherwise of his appeal to Kantian authority as such, and I believe that appeal to have been made primarily on disciplinary rather than aesthetic grounds. That is to say, I believe Greenberg's appeal is to the methodology of Kant's First Critique. At issue here is the question of whether Greenberg's view of autonomy and criticality is the same, or even compatible with, Kant's use of those terms.

For Kant, the notion of autonomy is not confined to disciplinary considerations within the First Critique but, as moral freedom, is central to the subject matter of his Second critique. Moreover, because Kant claims that beauty is the analogical symbol of the moral, the notion of autonomy is a constituent of his Third Critique; it famously appears in his claim that nothing gives the rule for art except the freely expressed *ingenium* of the producing artist. However, Kant's employment of the notion of autonomy ultimately raises serious problems, which I claim he was not able to satisfactorily resolve, for the coherent unity of his critical trilogy.

<u>The thread of autonomy in Greenberg and Kant</u>

Autonomy is a connecting thread that runs through the whole of this thesis. It runs through the work of Greenberg and Kant as the modernist response to the ancient and difficult problem of reconciling the concepts of freedom and necessity. It persists as a clearly visible thread until we get to the discourse of neuroscience where it disappears. I want to pursue this analogy of woven threads, of textiles, a little further.

Greenberg weaves a single but very strong thread to tie the flatness of the image in painting to the flatness of the object that is the painting. Greenberg's timeless conditions for the autonomy and quality of painting have, I claim, the form of a determinate judgement of cognition rather than a Kantian reflective judgement of taste. They certainly fulfil the very clear purpose (the end) for which they were intended: the autonomy of painting. There is no purposiveness without purpose about Greenberg's thread. Analogically, Greenberg's thread, that is as thick as a ship's hawser, secures the ship of painting to the safety of the flat and solid dockside that is its substrate; the ship and its artistic crew are safe from the perils of theatricality, sculpture, film and mass entertainment that inhabit the rocks and shallows beyond the harbour wall.

There are, however, a few problems with this solution. The ship has become useless as a ship because it can't go anywhere and the crew become extremely bored and rebellious after about five years; they throw the captain overboard and sail off into the blue yonder with a reluctance ever to tie up in that particular harbour again. The hawser is deemed useless for any other purpose; it is too thick to be woven and it is not considered to be beautiful enough to be worth keeping. This outcome, though unavoidable, is not altogether desirable because Greenberg's recognition of the importance of flat pictorial space in painting and his identification of that importance as manifested through a trait in the historical evolution of painting[110] remains valuable.

Kant's approach to the form of argumentation is very different to Greenberg's; he is not much interested in analytic identities between objects though he employs the ideas of discrete entities, autonomous from each other and connected by linear threads of causality. These threads however, are much finer, more subtle and numerous than Greenberg's single hawser. They are woven into a complex textile in the baroque style. Despite the ingenious construction of that work it remains something woven on a traditional loom; the threads still run in straight lines and although they proceed in different directions and pass over and underneath each other they remain identifiably separate entities. The threads Kant uses are taken from his inheritance of a roughly two thousand year old European philosophical bequest with which he is very familiar. Kant is always concerned not to let one of the (broadly) two types of ancient thread, rationalism and empiricism, that he uses dominate the other and this leads to compositional difficulties in the appearance of the finished piece of work.

On presentation to the world, Kant's work is immediately recognised as a hugely important development and also provokes a controversial reception. Some complain that what he has produced is a one-size garment that doesn't fit all. Others complain that, taken as a whole, it simply doesn't quite work or that it is so formal that it is almost content-free. Yet others protest that the unique ontological thread that Kant has woven into an otherwise methodological text for the express purpose of unifying its disparate and sometimes contradictory parts is invisible, unknowable and is not really there. These protesters entertain suspicions that the ontological unifying thread in the weave has something of the quality of tautology about it. They also

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[110] I refer to his essay Towards a Newer Laocoon written some twenty years before Modernist Painting.

think that Kant's use of an ontological thread indicates a drift towards the dogmatic metaphysical claims of which he was so critical at the beginning of his First Critique.

Despite, or perhaps because of, all these objections, Kant's work still fascinates his readers. For two hundred years people have unpicked and rewoven parts of his text in order to address issues within it that concern them. Some of them have produced texts that are very creative indeed and address many, but not all, of the difficulties in the original work, yet remain recognisably Kantian.[111] The work of some of his other critics has not been so felicitous.

In recent years a new group of researchers have again asked the first and the third of the three fundamental questions posed by Kant: "What can we know?" and "How do we feel?"[112] Neuroscientists claim that the answer to these questions may lie within the dynamical operations between the tiny (but not discrete) particles of the stuff of which our brains are made and between the dynamics between our brains, our bodies and the world beyond our bodies. They do not claim that the material "objects"[113] of which our brains are made are capable of providing the answer to these questions, they are much more interested in what is going on in the dynamical relations between these objects. Neither do they claim that intra-brain dynamics considered apart from the dynamics of the body and of the world may provide the answer to these fundamental questions. They conceive of the brain and the body together as a self-organising system,[114] which is without meaning other than in its relation to the world beyond it. Neuroscience does not deny the value of philosophical introspection. It is probably fair to say, however, that most neuroscientists regard their observations of brain activity as the ultimate explanation of these two questions – and the answers to them – rather than philosophical introspection.

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[111] I have in mind here Theodor Adorno's re-inscription of Kantian aesthetics.

[112] As yet not much attention has been paid to Kant's second question, " What ought we to do?"

[113] I use quotation marks here to emphasise the recognition by neuroscience that the boundaries of these organs of the brain are somewhat arbitrary. The objects of neuroscience are non-discrete, "soft" or "fuzzy" rather than hard-edged. This is not seen as a consequence of experimental imprecision, but to do with the contemporary scientific concept of object as a continuum.

[114] The idea of an embodied brain as a self-organising system is basically similar to the idea of an organism that gives to itself its own rules, to the transcendentally free subject that is indispensable to Kant's critical trilogy, and is especially important in his moral philosophy.

The theories of neuroscience are not woven on the traditional loom that I have described above. Not only is the thread they use more than a thousand times finer than the silk of a spider's web, it is not woven in straight lines but in multiple and chaotically (but not randomly) organised recursive and reflexive loops. Moreover the threads are not lines of causal connections but of correlated dynamical activities between distinguishable but not distinct (autonomous) areas of the brain. The situation is more complex still because each thread is connected to up to ten thousand other threads. By that statement I do not mean that it simply butts up against other threads as in a conventional textile, but exchanges part of itself – its neuro-chemical fluids – with other threads (neurons) at the same time receiving neuro-chemicals and electrical signals from all those neighbouring neurons.[115] Most fundamentally of all, the text of the brain is not woven, but grows and organises that growth within the context of body and the world. In this description I am not contrasting or opposing the dynamical activity of the brain to the dynamics of discursive practice, consensual agreement, relationships, culture and history - all the things we know and value about our active selves. I am saying that the dynamical operations of the embodied brain is the correlate within each of us, of all these things, the archetypal dynamical form that is, as such, the universal ground that we seek for all these activities of mind and body. The textile that neuroscience studies is both fundamentally different from, yet ultimately the origin of, the work of Greenberg, Kant and everyone else. It is this play between ipseity and alterity in the relation between individual persons and the basic commonality of their brains that I find so fascinating.

Returning briefly to the work of Clement Greenberg, we have seen that he appears to hold the view that space is given in sensation by objects or relations between objects, that flatness is a spatial property of the object that is the painting (and of the image within it) and is simply "visually transmitted" to the beholding subject via sensation. Kant on the other hand claims that space is not a property of objects or of relations between them but is generated entirely within the subject. At issue here is the fundamental question of whether the subject or the object is the origin of experience; for Kant it is the former and for Greenberg it appears to be the latter. This question matters a great deal because an active subject is indispensable to

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[115] The analogy to some sort of ceaseless, promiscuous and frantic sexual orgy between all the tiny constituent parts of the brain is bizarre, but not altogether inaccurate!

Kantian methodology, autonomy and self-criticality all of which are explicitly claimed by Greenberg (and are, I claim, unjustifiably conflated by him) as the authority for his conditions for the autonomy and quality of painting in modernism. Yet the Greenbergian subject appears to have a totally passive role in Modernist Painting.

I claim that neuroscience strongly supports the Kantian view of an active subject in spatial perception, indeed in all human activity, mental or physical, in relation to the world of experience. As described in Chapter Four, the positivist-pragmatist model identifies the dynamical interaction between the thalamus and the hippocampus, which is indispensable to the preaffference loop of perception. It is the operator that converts all incoming sensation into spatio-temporal form as electromagnetic waves transmitted onwards to all areas of the brain. The cognitive-passivist model of neuroscience also agrees, though it differs significantly in operational detail, that spatio-temporal encoding of all sensation takes place in this general area of the brain. Both models agree that spatio-temporality is generated within the brain. Neither model takes the view that there is any point in all this subjective spatio-temporal activity without sensation from the world, and that sensation is therefore crucially involved in perception, but that does not mean that sensation alone suffices for it.

The positivist-pragmatist model (which I adopt as my own position in this thesis) goes much further than the cognitivist-passivist one in emphasising the active role of the subject because it claims that the subject actually initiates the process of perception. The subject only perceives what is relevant to it in the moment; it starts to search for sensory information about the world that is relevant to its bodily needs at a particular time. This in turn implies that it must have some general idea, some anticipation, of what might be relevant to those needs. That general idea of what might be relevant is provided by its memories, which are not stored sensation or representations of objects but are the meanings that it has made of previous experiences of objects. These meanings are encoded in the (spatio-temporal) features of the constant yet always subtly changing patterns of neuronal electro-chemical waveforms that persist over very long periods of time. The exact patterns of brain activity are particular to individuals; they are not free from individual values, culture, learning and history. What is claimed to be universal by this model is the dynamical form of these activities and our ability to perform them. This formal universality is similar, though not identical, to Kant's claim for the universality of his aesthetic judgement and to his concept of judgement as a power in us in general. I claim that the positivist-

pragmatist model does provide support for a very active subject in all aspects of both intellectual and emotional experience and for the subject as the origin of space and time. The passivist-cognitivist model provides much less support, but also agrees that the subject is active in the construction of spatio-temporal concepts. Neither model of neuroscience supports Greenberg's very passive concept of the subject, especially in terms of space and time.

The concept of absolute autonomy is central and problematic in the work of both Greenberg and Kant. As I have claimed in Chapter Two, they do not use the word in a way that suggests that it has the same meaning for both of them. Greenberg clearly considers art in general to enjoy an autonomous domain from other human productions. He also sought to establish the complete autonomy of painting from all other art forms; he wanted autonomy for painting within the general discursive practice of art that was itself autonomous from non-art practices. Kant had a similar ambition for autonomy between the different judgements that support his three Critiques, yet he wanted his work as a whole to be a unified system autonomous from the rationalist and empiricist traditions that informed it. For Kant, artistic judgement and feeling are aesthetical and as such their form is reflective and not determinate. Yet Kant claims that the form of aesthetic judgement is shared with that of moral judgement, as it must be if he is to claim that beauty is the analogical[116] symbol of the moral. What is perfectly similar about the relation of the Kantian judgement of taste to his judgement of practical reason is that they do not involve objective determination, objective interest or empirical conditions as their end. Thus although Kant tries to maintain the mutual autonomy between his moral and aesthetic judgements he has difficulty in maintaining an absolute autonomy between them. As discussed in Chapter Three,[117] Kant has the same sort of difficulty, though for different reasons, in maintaining autonomy between his aesthetical and cognitive judgements. Yet Kant also needs a heteronomous moment shared between these different judgements if he is to unite his critical trilogy as a whole.

The point I am making is that Kant had great difficulty in providing a unified explanation of his faculties of mind (equivalent, in broad terms, to an explanation of

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[116] As discussed in Chapter Two, the term analogy has a special meaning for Kant; it is the perfectly similar form between the antecedent and consequent terms of the analogy that is shared between dissimilar things.

[117] The necessary conditions for the judgement of cognition turn out to be the sufficient conditions for the judgement of taste.

the possibility for a unitary self) and at the same time retaining the idea of complete autonomy between the faculties of mind, between the different aspects of that unitary self. I have always been surprised that Greenberg, despite his claimed admiration for Kant, apparently disregarded the warning evident in Kant's work, which is that unrestrained autonomy between the parts is bought at the expense of autonomy of the whole and the converse. Greenberg thus comes very close to Kant insofar as they both experience very similar difficulties as a result of their preoccupation with the idea of autonomy.

Greenberg's problem of sustaining the autonomy of painting within the autonomy of art in general parallels Kant's difficulties of maintaining the autonomy of the faculties of mind within an autonomous (coherent and unitary) theory of mind. If painting is to be altogether separated from other art forms it has to expunge from within itself whatever it shares with any other art form. What is common to all art forms is, by disciplinary definition, that they share a formal quality designated by the term art. Therefore painting, to be completely autonomous from other art forms, must cease to share that quality and that designation. That is not a satisfactory outcome. As we have seen in Chapter Three, a similar problem is experienced by Kant, who has great difficulty in finding any free (self-subsistent) beauties, beauties as such, unmediated by either moral or objective elements in their constitution. This problem has ultimately arisen because Kant wants to ensure the autonomy of the aesthetic judgement of taste, yet in doing so he has had to make beauty an objectively empty concept. In these circumstances it is clearly not going to be easy to find a specific object that is a free beauty.

We have a situation in which Kant and Greenberg come almost full circle inasmuch as the difference between them is, to a significant degree, subsumed; Greenberg establishes the complete autonomy of painting in modernism at the cost of making such painting autonomous from its own discursive practice: from art. Kant establishes the autonomy of the aesthetic judgement of taste from the judgements of practical reason at the cost of bringing beautiful objects very close indeed to ordinary objects of cognition yet paradoxically cannot find more than a handful of objects of cognition that actually satisfy the condition that they are free beauties.[118] We have arrived at a situation in which Greenberg has, to a degree, been reconciled to Kant but only insofar as his work suffers from the same intractable problems that arise in

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[118] Kant (CJ prop 16) can only come up with a very few rather disappointing examples such as parrots and humming birds, seashells and wallpaper borders in the Greek style.

the work of both authors through their use of the concept of absolute autonomy for disciplinary reasons. That is not the sort of Kantian authority for Modernist Painting that Greenberg (presumably) had in mind.

At the end of Chapter Two I drew attention to Greenberg's reference to representations of two-dimensional space in painting, rather than simply to two-dimensional space. I do not want to repeat the details of my argument here but only want to say that, at that time, I felt that such a reference to representations by Greenberg had the possibility of evidencing a subjective moment in his spatial arguments that are the basis of the claims he makes in Modernist Painting. My motivation was to find a way in which Greenberg's ideas could be seen as having a subjective moment that would sustain, to a degree at least, his claim that his theory of painting was critical in the Kantian sense. Although I have been very critical of Greenberg's determinate conditions for painting, I value his emphasis on the importance of flatness in pictorial space and criticality in painting; I wanted, therefore, to retain some authority for Greenberg's ideas as an important historical trait in painting, but not to the degree that they became prescriptive for painting practice.

Given the empiricist positioning of Modernist Painting taken as a whole, I thought that a subjective interpretation of Greenberg's use of the term representation (such as would link him to Kant's conception of space) seemed possible but improbable; and I still hold that view. My present position on this issue is that both Greenberg and Kant leave their use of the term representation ambiguous as to whether it is subjective or objective.[119] This ambiguity now seems to me to be part of the general problems associated with autonomy discussed in this chapter. The problem of autonomy is primarily a methodological one for Kant. In the preface to the second edition of the First Critique (CPR, Bxvi) he comments that pre-critical knowledge assumed that "*our knowledge must conform to objects*" but goes on to say that now, "*we must make trial and suppose that objects must conform to our knowledge*". Kant uses the term "make trial" to indicate a methodological and not an ontological claim. The question of whether we epistemically conform to objects or vice versa obviously informs his famous letter of 1772 to Marcus Hertz, in which he writes,

> *I asked myself: What is the ground of the relation of that in us, which we call "representation" to the object?*

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[119] Kant usually uses the term subjectively but on occasions either uses it in an objective sense or leaves its sense of use unclear.

Kant proceeds for the rest of his critical trilogy on the methodological supposition that objects conform to us, but at least he has asked the critical question at the outset and is fully aware of the suppositional nature of his answer to it. Greenberg, I claim, never asks anything remotely similar to Kant's critical question, but proceeds on the basis that we epistemically conform to objects and that to be critical it suffices simply to identify the flatness of pictorial space with the flatness of the material substrate of the painting. The fundamental point that I am making here is that Greenberg's position is one of simple ipseity and Kant's position has reflected on the relation between ipseity and alterity. That is the difference in positioning that, I claim makes Kant's work critical and Greenberg's not. A passing reference to representation by Greenberg does not, I suggest, suffice to negate that difference.

This problem with Greenberg's essay Modernist Painting is additional, though not wholly unrelated, to the contradictions discussed earlier of the compatibility of Greenberg's determinate and objectively interested claim to aesthetic autonomy for painting and Kant's reflective and objectively disinterested aesthetic judgement of taste. It is not altogether surprising that two very modernist men should both encounter what are, at base, the same serious difficulties as a result of their enthusiasm for the inherently modernist concept of autonomy.

The need for modernist discourses to privilege one aspect of a dichotomy at the expense of suppressing the other has been a familiar trait of modernism since Descartes. Although Kant makes very considerable progress in avoiding the dichotomy between empiricism and rationalism he cannot altogether avoid it. The critical question goes some way towards accepting the need for a relation between ipseity and alterity rather than an absolute distinction between them. Kant sets up a relation between subject and object in which each contributes to, and is indispensable for, experience and knowledge of the world by us. Neither subjects nor objects alone suffice for that, but the circular relation between them does. It is that relation between the ipseity of the transcendental subject (whose sole content consists in the ability to reason) and the alterity of objects in the world (which do not reason) that together enable the world as we know and experience it.[120] In this sense the circularity of Kant's question is a reflective one and anticipates the eventual emergence of his reflective judgement in his Third Critique.

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[120] The pure a priori intuitions of space and time are, for Kant, form and not content. That separation and opposition is integrated and, to a degree, contested in this thesis.

Though this development preceded Greenberg by nearly two hundred years it is a method of potentially far greater creative potential than his determinate judgement that operates linearly and analytically within the sameness of empirical objectivity without any subjective moment. Having said that, however, Kant's answer to his own critical question does not, I suggest, quite fulfil the promise of the question itself and this is evidenced by all the difficulties and aporiai in his work discussed in Chapters Three onwards of this thesis. The problem is that to overcome the problems inherent in a system based on autonomous categories, Kant has to "go up a level" from methodology to ontology; he has to posit the transcendental subject as part of his supersensible substrate of humanity and phenomena. After studying Kant for a while one comes to recognise this change of gear in his text as a move that indicates that he is in some difficulty. This problem is ultimately a very simple one; it is that having established the autonomy of the (categorically based) parts of his work he cannot establish the autonomy of the whole through the same methodological means. That matters because the ability to meaningfully ask his three fundamental questions: What can we know? What ought we to do? How do we feel? is part of ourselves. Moreover our notion of self is a unitary one that persists over time and not a self split into irreconcilable parts.

<u>Towards a new theory of beauty: ipseity and alterity, loosening the grip of autonomy</u>

What is needed then is some explanation of this unitary self that has the possibility of encompassing those epistemic, moral and affective aspects of the Kantian subject signified by these three questions. Moreover, I believe that this required explanation should itself be methodologically based and epistemically accessible rather than an ontological claim that is, by definition, opaque to further enquiry. It is for this reason that, in Chapter Four, I make the turn to neuroscience.

Neuroscience has several advantages compared to Kantian methodology and philosophy for my project. Firstly its discursive operations remain at the contingent level of methodology and do not appeal to ontological/metaphysical claims when in difficulty. Neuroscience observes and seeks to explain the functional operations of the brain and it supposes that these correlate in some not yet fully explained way to the operations of mind. It does not identify mind with brain; it does not make ontological claims. The link between mind and brain remains a contingent and methodological one. We are asked to proceed with our enquiry as if mind conformed (in the sense of sharing dynamical form of operations) to brain, and in this sense

neuroscience echoes the self-critical epistemic methodology of Kant's First Critique. However, we are also asked to proceed as if brain conformed to mind, in the sense that neuroscience regards knowledge of people's reports on what they think and feel and their reasons for the mental or physical actions that they perform as just as important as the empirical observations of the brain using very complex and expensive machines. The point that I am alluding to here is that if neuroscience is asked the critical Kantian questions: "do we epistemically conform to objects?" or, "do objects epistemically conform to us?" then it will answer yes to both questions; and at this point an important difference between modernism and Kant on the one hand, and contemporary neuroscience on the other, emerges.

Neuroscience is able to make an affirmative response to both these two questions for several reasons, most, if not all, of which are closely related. Firstly, neuroscience does not deal in autonomously discrete entities but in relations between groups, loosely and relationally defined assemblies, of organs of the brain that are considered in terms of their shared function and operational dynamics. Large assemblies of neurons that are semi-autonomous physically constitute these organs and also share in the overall activity of all regions of the brain. No neuron is fully autonomous from its thousands of neighbours or from the brain as a whole.[121] The lack of autonomy is not confined to the micro (neuronal) level or even to the meso (regional or organ level) but also extends to the macro (global states) of the brain considered as a whole. Moreover the brain is not autonomous from the body, and the brain and body together (the organism) is not autonomous from the world beyond the boundary of the skin. Everything is permeable, relational and without meaning other than in relation to "otherness". Neuroscience wholeheartedly embraces a co-operative and consensual rather than a dichotomous and oppositional relation between ipseity and alterity. The neurological model of the brain thus contains within itself a basis for the sensus communis, the consensual agreement, so important for the Kantian claims for the universality of his judgements.

Such a grouping of (partially) self-organising systems within systems is extremely complex and the traditional concepts of linear or circular causality fail to adequately explain it. For that reason, neuroscience uses a methodology based on statistical

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[121] The number of neurons in each of our brains is roughly equal to the present population of the world. If we imagine each neuron as an individual person, in a family, a local society, a region and a nation state involved in international diplomacy and trade, we begin to see the situation of a single neuron in the brain.

correlation between elements of a large ensemble[122] rather than the (ultimately just as obscure) concept of a supposed causal connection between antecedent and consequent events involving a small number of discrete entities that informs most traditional Western philosophy. For similar reasons, neuroscience employs fairly sophisticated mathematics to describe the operations of the living brain; it uses chaos and network theory as well as group algebra and the non-Euclidean geometry of multiple spaces as its tools and has recourse to very complex machines that require massive computational facilities to observe the workings of the brain.

All this may sound somewhat daunting, but the point that I wish to emphasise is a simple one: what this all boils down to is the use of (scientifically based) experience to limit speculation based in logical entailments from posited principles. That is the same ambition as Kant had for the project of his First Critique: to limit the speculative dogmatism of metaphysics, which he saw as resulting from the exercise of reason unsupported by experience. It is the same self-critical methodology at work here, only the subject matter and the available science (experience) has changed. It is the form of the enterprises that bridges the distance between neuroscience and Kant.

This brings me to the question of form in Kant and its relation to form in neuroscience. In the remarks made above I claim that the form of Kant's motivation and his idea of limiting what we may claim as knowledge by experience is paralleled by neuroscience. That is not to claim that the detailed form of argumentation is the same for both paradigms because it clearly is not. Neuroscience proposes an interpretation of the brain in terms that are both recursive and reflexive, the basic details of which have already been described and are not repeated here. Kant proposes autonomous forms of judgement that are determinate, regulative, and reflective. It is the last of these that is of interest here because it may be regarded, I claim, as a reductive special case of the reflexive form of relationship that applies, as a first approximation, to the operations of the brain, its relation to the body and to the world. I am arguing, by analogy, that the Kantian reflective judgement is to the reflexive neuroscientific theories of brain as classical Newtonian physics is to relativistic quantum dynamics.[123] The former is a reduction of the latter and is only

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[122] There are about ten to the power of eleven neurons in an adult human brain, each with up to ten thousand connections to other neurons. I once calculated, as a matter of interest, that the number of possible (as distinct from actual) different combinations of neuronal connections in one brain was of a similar order of magnitude to the number of molecules in the planet earth.

[123] The comparison is between physics at GCSE level and at post-graduate research level.

now discursively recognised as valid inasmuch as it is contingent on it. That is not intended to denigrate the innovative value of the Kantian reflective judgement for his times. It is simply to recognise that science and philosophical introspection have moved on a considerable distance since then. The reflexive and recursive dynamics that flow from the positivist-pragmatist model of neuroscience are extremely important. They form a bridge between the discipline and the phenomenological philosophy of the late 19th and 20th centuries as well as a link to Kant. More importantly they provide a link to those contemporary philosophies that are preoccupied with the *fold* that encompasses both ipseity and alterity.

So far, I have only considered the support that is afforded to Kant by neuroscience and vice versa. There are also significant areas of difference and even contestation between the two discourses that have been discussed already, but which I think it is appropriate to summarise here because of their direct relevance to aesthetics.

Affective neuroscience does not, as discussed in the previous chapter, consider pleasure and desire to be categorically distinct as Kant does. That obviously has wide-ranging implications for the Kantian taxonomy of beauty. The pleasure or delight that we take in the estimation of beauty cannot normally, in neuroscientific terms, be wholly apart from objective interest. The Kantian distinction between the good, the agreeable and the beautiful is rendered problematic, as is the distinction between free and dependent beauties. A similar conclusion must follow for the Kantian judgement of taste, that it cannot be entirely objectively disinterested. These conclusions have implicit consequences for Kantian morality and the judgements of practical reason because of the shared formal nature of both moral and aesthetical judgements within the Kantian paradigm. If, as claimed by affective neuroscience, pleasure is, to a degree, coupled with desire, and given that, for Kant, desire as a faculty of mind includes both its higher (moral) and lower (corporeal) forms, then it follows that the Kantian moral and practical judgements become constituted by an objective interest that may be of the higher or lower Kantian form, or both. Paradoxically, this result goes some way to re-inscribe Kantian moral theory so as to protect it from one of the charges often laid against it, that it is an entirely formal system that has no objective content to guide our actions in the world.

The above argument operates in the opposite direction too, with consequences for artists and art. If the moral and the aesthetical judgements are both constituted by an amalgam of pleasure and desire neither is objectively (in the moral as well as the

cognitive sense) disinterested. It might be argued, as I do, that the unrestrained moral freedom accorded to artists (because of their free genius) by the response of romanticism to Kant looks inappropriate. Affective neuroscience resists, by implication, the view of artists as Zarathustra-like figures who are somehow above the moral restraints on society as a whole. Having said that, the partial confluence of the two judgements also provides artists with a possibility to influence moral ideas rather than merely analogically symbolising them.

The above discussion is an example of how the challenge of neuroscience to the notion of autonomy undermines the dichotomous relation between ipseity and alterity that informs the arguments of Greenberg and Kant. The distinction between different forms of artistic practice and between art and non-art practices begins to crumble away, as do the distinctions within the Kantian taxonomy of beauty, between disinterested pleasure and interested desire, and between the different autonomous Kantian judgements.

It is interesting to look at the loosening grip of autonomy on these discourses from the point of view of Cabanac's theory of pleasure as the common currency of evaluative decision-making discussed in the previous chapter. Cabanac's experiments are limited to sensory pleasures with clear physiological implications. As Cabanac (1997, p14) comments,

> *One may question whether it is possible to extend the conclusions to other domains than biology...McFarland and Sibly (1975) pointed out that behaviour is also a common path on which all motivations converge. This image incorporates all motivations into a unique category since behaviour must satisfy not only physiological needs but also social, moral, aesthetical and playful motivations.*

Because pleasure is, in Cabanac's theory the common currency for motivation, it follows that pleasure constitutes this common path on which all motivations converge. I am strongly in favour of the extension of pleasure to explain all motivations that Cabanac proposes. Such an extension is entirely consistent with the central role that I have established for beauty as pleasure, which is indispensable to all intentional action, including mental actions such as the different Kantian judgements.

I like the analogy of pleasure as a common pathway because pathways bring people and things together. I imagine this pathway as a river meandering across a flat plain (though not a Greenbergian plane) linking people, towns and villages together. In this image pleasure comes to be seen as an enabling and life enhancing experiential stream that nurtures and sustains not only the individuals living by its banks, but also the citadels of Kantian judgements through which it flows. Pleasure is not raised to a dominant position of authority in this image but remains an enabling rather than a controlling power.[124] In such an image, there is no need for unifying ideas such as a supersensible substrate floating high in the sky and out of sight above the landscape because the stream itself enables and rewards motivation and communication between people; it provides the means for the social construction of inter-subjective consensual agreement.

Neuroscience neither supports nor contests the Kantian idea of a transcendental subject as part of the supersensible substrate of humanity and phenomena. It regards it as irrelevant, because it believes that the specificities of our embodiment provide sufficient inter-subjectivity for its discursive practices.

What, then, are the implications of all these conclusions for art practice and discourse? As expected, neuroscience provides no proximate rules for the production of art since it does not, I claim, recognise any qualitative difference between the pleasures or anticipated displeasures that stimulate and reward all possible mental and physical actions. The streams of pleasure and displeasure spring from all mental and physical activities and flow around the brain, which automatically chooses actions that will maximise the former and minimise the latter. The body that includes the brain will drink from the river of displeasure if, and only if, it can thus avoid greater future displeasure, or if, in so doing, it anticipates larger draughts of pleasure in future as a result. That describes the only rule of affective neuroscience.

The commonality of pleasures that motivate and reward different mental and physical actions does not signify a lack of subjective freedom or choice; rather it guarantees our ability to freely choose from amongst all possible actions very quickly. If our felt embodied pleasures were all different for each possible action in relation to either real objects or those of mind (which ultimately are based on real objects) then how

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[124] Throughout this thesis I have wanted to construct a theory of beauty that does not simply reverse the Kantian hegemony of reason, replacing it by pleasure.

could we ever decide what to do? Moreover, all our actions would be objectively determined and pleasure would have no role as liking but would be identical with desire (which we already have anyway) as wanting or needing. This is important because art is ultimately not something we need for objective ends but something that we simply like.

Additionally, I claim that it is precisely because the quality of pleasure, as embodied feelings, is not qualitatively determined by specific objects that we have the ability to learn; to re-predicate our feelings of pleasure onto new and different objects, including art objects, which have no objective use or direct relation to pleasure responses that have evolved in relation to stimuli that are useful for homeostatic needs. Affective neuroscience thus supports the concept of art as play, something that we do for its own sake because it is pleasurable. However, play is not without social purposes, and insofar as we regard people as phenomenal objects,[125] art has an objective purpose. If we also regard, as we must in Kantian moral terms, people as noumena, as ends in themselves, art is objectively without purpose. Contemporary affective neuroscience recognises this distinction, it values pleasure dirempted from ultimate physiological need. It values proximate pleasure for its own sake, and thus supports the social construction of art in culture. I claim that contemporary affective neuroscience therefore both explains and guarantees the possibility of art for us.

Implications for painting practice

From the above discussion and consequent claim that I make it follows that neuroscience is not going to provide specific objective rules for the production of a particular work of art. In this respect, affective neuroscience is thoroughly Kantian. Artists reading this thesis can relax at last; neuroscience is not going to destroy our artistic freedom!

However, affective neuroscience does offer some insights that are useful for producing artworks that are effective as pleasure stimuli for us, for art that we call beautiful. Because we enjoy not only bodily, but also mental activity, we take pleasure in re-predicating our embodied feelings onto new stimuli. Some of us may take more pleasure than others in that activity, which may partially explain the

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[125] As Kant thinks that we must insofar as we are of the world, though he does not, of course claim that we should only regard people phenomenally.

constant demand for new and different art and why some of us become artists and art theorists. The ultimate biological explanation for those choices may well lie in the frequency and intensity of the changes in our global brain states, described in Chapter Four.

The most significant implication of affective neuroscience for practicing artists is, I believe, the importance of form relative to content of the art work, if we are to experience the work as beautiful. As already reviewed in the previous chapter, Tinbergen (1954), and Ramachandran & Hirstein (1999) have conducted studies on vertebrates that indicate[126] the importance of both spatial and colour form in intentional action stimulated by pleasure. Their experiments suggest that it is the formal quality of objects that enable these relatively simple (compared to human) animals to re-predicate their pleasure responses, learned on a prototype that does provide direct physiological sensory reward (food), onto objects of exaggerated form that do not provide such a reward. I would very much like to participate in studies designed to assess the importance of form in human aesthetic responses to objects in general and to "art"[127] objects that exaggerate spatial or colour form. The advantage of human subjects is that they can give verbal reports on their feelings as well as execute simple behavioural tasks such as pushing buttons to indicate choice. But the crucial difference is that their brain activities can be simultaneously observed using EEG equipment designed for use on humans and which is readily available. Studies that directly monitor neurological brain states and transitions between these states are much more useful and reliable than studies which rely only on behavioural observation and/or individual reports on feelings. The technology exists for such studies and new techniques are presently in development that enables two subjects in conversation to be studied simultaneously. That development is potentially very useful because it opens the way to direct neurological studies of the social construction of the consensual agreement of aesthetic value as well as individual reports on pleasure.

As the end of this thesis approaches, I want to say a few words about its implications for my understanding of my own practice. In Chapter One I briefly described my

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[126] I have used this word instead of demonstrate because these experiments involve behavioural observations that are unsupported by direct neurological information about the animals' brain activities at the same time.

[127] I believe that initial studies would have to use simple "art" arrangements of images of objects in various spatial relations to each other, rather than sophisticated abstract or even figurative paintings that might be used in later experiments.

long-term interest in beauty in painting, pictorial space, surface quality and form. At that time I recognised the need for restraint in painting, but I sensed this at a visual level, as result of my personal taste rather than understanding.

As described in Chapter One, I developed a simple painting machine to apply industrial silicon to canvas. The machine could apply different repetitive waveforms but could not do anything else. The machine both enabled accurate application of the material and restrained freedom of composition. To make a new machine every time that I wanted to experiment with new ideas for painting was impractical, but my concerns went beyond technical problems; I became aware of the conflict between necessity and freedom and the problems within the idea of autonomy at the intellectual level as well as my experience of them within my practice that, at that time, revolved around a semi-autonomous machine.

This intellectual interest led me to a detailed study of Clement Greenberg's work and from there to a prolonged period of reading and reflection on the critical work of Immanuel Kant. Yet the insistent problems of relation between subjective freedom as autonomy and the objective necessities of nature, though illustrated by my study of Kant's work, remained, for me, largely unresolved. An excursion into the aesthetics of Theodor Adorno was helpful but did not quite provide what I needed: a means of internalising within myself some of the restraint previously provided by my painting machine and at the same time also sustaining, to a degree, my artistic freedom. I decided to turn to neuroscience at that point. A different possibility was the phenomenological philosophy of the late 19th and the 20th centuries, an already well-trodden path. Another reason for my decision to take a neuroscientific route was my early career in research physics, which meant that I still retained some familiarity with the procedures of science.

My principal interest in neuroscience has been in the extremely complex recursive and reflexive nature of the dynamical operations of that which it describes. My preoccupation is now with the form of these dynamics within the brain, between the brain and the body and between the organism and the world. The metaphor of the dance between the embodied brain and the world, described in Chapter Four, has lodged firmly in my mind and has taken hold of my imagination. I have come to see the world and my place in it within those reflexive, relational terms. That view differs substantially from the more linear and modernist world-view that I had at the beginning of this project.

That change is, I believe, what has begun, and will continue, to inform and influence my painting. That is a general point. Nevertheless, it is the central one that I wish to make because I believe that the construction of painting must relate to the change in the construction of the self of the painter. I do not believe that painting practice should be instrumental to aesthetic theory or the converse. These are quite different modalities and find relation only through the self that informs, and is formed by, both.

The reflexive and recursive description provided by neuroscience of the dynamical form of embodied brain and its relational to the world in perception has brought this thesis close to the current interest in philosophy that centres on ipseity and difference, but I have arrived there by different means. That opens up a possibility for a critical discourse of the relation between neuroscience and aesthetical writings that employ the idea of the fold.

Finally, I want to outline the narrative that I currently construct to describe the relation between the reflexive form of the theory in which I am interested and the paintings that I make. The difficulty that I face is that the theory is dynamical and paintings are static.[128] Although I do not want to represent the theory in my paintings, I want them to allude to it in some way. The reflexive dynamics of perception are extraordinarily complex. One might allude to that complexity by making very complicated paintings. The result might be an image on the canvas so complex that it would be difficult to discern formal structures within it. My main reason for not following that strategy is that the complexity is in us and not in the objects of our perception. Moreover, this complexity is a dynamical process rather than a static one. Painting is well suited to the latter, but is a difficult medium in which to adequately allude to rapid time-dependent operations. For these reasons, and because of my personal taste, I have chosen to make very simple paintings. I usually use only two colours and simple shapes that are either symmetrical or arranged together in a symmetrical way, sometimes both. It is this formal simplicity that enables me to play with the perception of pictorial space.

People often see the image in my paintings as a two-dimensional one and subsequently as three-dimensional, often followed by a reversion back to a two-dimensional interpretation of picture space. This indecision is repeated even when

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[128] I mean that painting is not a time-based medium in the way that say, music or film are. Our experience of paintings may well be a dynamic one but that dynamism is primarily given by us and not the object that is the painting.

they are familiar with the painting. Additionally, people find it difficult to decide whether, when perceiving the picture space as three-dimensional, it is recessive space away from them or intrusive space towards them. It is my hope that this ambiguity, this indecision and inability to reach a singular determination of the dimensionality of the pictorial space in what is basically a very simple arrangement of coloured marks on a flat surface, will give pleasure to people through playing with their intuitions of space and time, that they will experience the paintings as beautiful. I also hope that some people will realise that this dynamical play, this pleasure and beauty is within themselves and not in the static object before their eyes. Some may reflect on the difficulties of that simple conclusion; they may begin to question whether it is just in them or in the "other than them" too, and what do the concepts of self, sameness and otherness mean anyway? I am a very hopeful painter! But then artists are optimists about the power of art, its ability to stimulate the thoughts and feelings of people; they have to be.

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APPENDIX ONE
KANT

The synthetic a priori judgement and the judgement of sensibility: time and space

Kant's claim that space and time are pure a priori intuitions (formal structures of mind in the subject that are not derived from objects but which enable us to experience objects) is inconsistent with our natural view, which is that intuitions, being the representations whereby objects are given to us in experience, are a posteriori (derived from experience of objects). It is, therefore, important to see how intuitions can have an a priori (subjective) element. Kant justifies this claim firstly by reference to the idea of the synthetic a priori judgement. His argument goes as follows. Synthetic judgements are made true by objects, not concepts, and an intuition is the representation by which objects are given. Just as an a priori judgement requires an a priori ground so a synthetic a priori judgement is possible if there is not only a ground that contains an a priori part, (that is to do with us) but also a part that is synthetically grounded in (that is to do with, and is valid for) the object in the world. An intuition, being the representation whereby objects are given to us in experience, is capable of satisfying this second requirement. Thus an a priori intuition is possible, because the grounds for it can be satisfied.

Kant also claims that experience cannot be all content, it must have form; that which orders sensation into a structure so that we may be cognitively conscious of it in experience. Whatever this relational structure of form may be, Kant claims, it must be supplied by us a priori, because whatever orders sensation cannot itself be given or derived from sensation. If an intuition contains only formal, a priori elements, it follows that we have a special kind of intuition that is independent of sensation, and consequently of affect also, because Kant claims affect to be a result of pure sensation. Kant calls such intuition pure a priori intuition. For Kant, there are only two intuitions that are pure a priori: space and time.

Returning to my quotation from Kant on the title page of Chapter Two, it is now clear that Kant's view of space and time is the third of the options outlined in the quotation. It is quite distinct from, and not reducible to, the first and second views: those of Newton and Leibniz respectively. As Gardner (1999, p88) points out, both Newton and Leibniz maintain that space and time are contained in the world, independently

of the subject's awareness, and that we have representations of space and time because we have knowledge of reality. Kant denies that.

Kant's view of the spatio-temporal is based on the distinction between appearance and "thing in itself". His transcendental idealism (that leads to his theory of space and time) is introduced in the preface to the First Critique (Kant, 1781/87). It is explained further in terms of his Copernican reversal (see Appendix Two below) of the pre-critical philosophies which all claim that our cognition must conform to things in themselves. The Transcendental Aesthetic re-examines the distinction between appearances and things in themselves in terms of Kant's theory of sensibility. It is spatio-temporality that is particular, Kant claims, to human sensibility rather than to objects.

It is important to be clear about the difference between objects considered from the standpoint of Kant's transcendental idealism and objects considered from the everyday attitude/common sense standpoint. In the former case objects are considered as to their possibility in terms of their relation to our mode of cognition. In the latter case they are considered merely as how they appear to us through our cognition.

Kant's transcendental idealism does not preclude empirical reality, but allows it in the conditional sense that though space, time and form are not absolutely real, they are necessary, a priori, for the constitution by us, of all objects of experience. The converse, that objects are necessary for the constitution, by us, of space and time, is most definitely not true for Kant - and this is central to my argument regarding Greenberg's conditions for painting's autonomy.

We cannot have experience of objects without space or time, but we also need existent, though not absolutely existent, objects for experience - otherwise Kant's idealism would be unlimited, which it is not. But these non-absolutely existent objects are, for Kant, only possible for us through experience, which, in turn, is dependent on our formal and entirely subjective faculties of space and time - which strictly limits Kant's empiricism. It is in this sense that empirical reality is contingently possible for Kant; it is always ultimately limited by his transcendental idealism.

So although the spatio-temporal is subjective from the transcendental point of view, it is objective from the common sense or human point of view. The purpose of

transcendental idealism is not to allow us to remove ourselves from the human standpoint, to step outside our own subjectivity, but rather to say something about that standpoint instead of about the world, which that standpoint presents to us.

In the development of this explanation, the term a priori has acquired additional meaning. In the introduction to the First Critique it meant, *"not arising out of experience".* It was then developed further to also mean "*presupposed for experience*". By the time we get to the treatment of transcendental idealism, it has also come to mean "*belonging only to the subjective, transcendental, object-enabling constitution of our mind."* (Gardner 1999, p 93)

Kant is not so much about setting limits around ideas or things in themselves, but more to do with a sophisticated enquiry into the possibility of knowledge about objects and metaphysics, about knowledge for us. For me, Kant is about asking questions about how we can have knowledge rather than providing declamatory answers about what objects are.

Greenberg's conception of space can only be inferred from certain passages in Modernist Painting. For example, Greenberg (1965, para 9) states,

> *It is not in principle that Modernist painting in its latest phase has abandoned the representation of recognisable objects. What it has abandoned in principle is the representation of the kind of space that recognisable, three-dimensional objects can inhabit.*

In this passage, Greenberg is clearly conceptualising space in unequivocally Newtonian terms. Unlike Kant, Newton held that space exists absolutely and quite independently of objects that "inhabit" it. Kant (1781) insists that space is a pure a priori intuition, as we have already seen, but he also claims that its existence is non-absolute, a conclusion that results from the fact that, for Kant, space is no more than sensibility, that is to say, a subjective condition, in us, that precedes perception.

APPENDIX TWO
KANT

The Copernican Revolution

In his Preface to the Second Edition of the First Critique, Kant (1787, Bxv) makes the central role of the subject within experience and knowledge explicit.

> *We here propose to do just what COPERNICUS did in attempting to explain the celestial movements. When he found that he could make no progress by assuming that all the heavenly bodies revolved around the spectator, he reversed the process, and tried the experiment of assuming that the spectator revolved, while the stars remained at rest. We make the same experiment with regard to the intuition of objects. If the intuition must conform to the nature of the objects, I do not see how we can know anything about that nature a priori. If on the other hand, the object (qua subject of the senses) conforms to the nature of our faculty of intuition, I can then easily conceive of the possibility of such an a priori knowledge. Now as I cannot rest in the mere intuitions, but - if they are to become knowledge – must refer them, as representations to something as object, and must determine the latter by means of the former, here again there are two courses open to me. Either, first, I may assume that the concepts, by which I effect this determination, conform to the object – and in this case I am reduced to the same perplexity as before with regard to how I can know something a priori; or secondly, I may assume that the objects, or, which is the same thing, that experience, in which alone objects, as given, are known, conform to my conceptions – and then I am at no loss how to proceed. For experience itself is a mode of knowledge that requires understanding. Before objects are given to me, that is, a priori, I must presuppose in myself laws of understanding, which are expressed in concepts a priori. To these concepts, then, all the objects of experience must necessarily conform.....we only know in things a priori that which we ourselves place in them."*

The point that I want to make here is that Kant puts forward the idea of an epistemic reversal in our conformity with objects as an experimental procedure; no ontological claim is made here. The epistemic reversal therefore inheres in Kant's methodology before it appears in his philosophy. It is only later that Kant sets out to prove philosophically, rather than hypothetically, that objects conform to knowledge and not that knowledge conforms to objects. This he achieves by reference to the nature of

our representations of space and time and the concepts of understanding. If Greenberg is to claim that his own methodology is Kantian, I suggest that he must incorporate in it a similar epistemic reversal to that of Kant.

Space and Time

Kant (1781) claims in the introduction to the Transcendental Aesthetic in The First Critique, that for something to be in space and time we must be capable of experiencing that thing. In other words, space and time have no meaning other than in terms of our experience of them. Things in time and space are what we call objects in the real world. It is counter-intuitive for us to suppose that the existence of objects depends on us, and Kant is not going nearly as far as Berkeley in that respect. All Kant is claiming is that for an object to be in time and space it must be experienced by us. Before Kant the problem of how we know about reality and objects (epistemology) was considered to be entirely separate from the problem of what is the constitution of reality (ontology/metaphysics). Kant refuses to address the constitution of reality directly; he does not posit a class of real things in general, but instead directs his attention to defining a more limited class of objects: those that are knowable to us.

Objecthood and our knowledge of it are no longer separable, but are considered together, each in terms of the other. Kant (1781, p48-49) develops this idea further and defines his terms in part one of his Introduction to the Transcendental Aesthetic.

> *The effect of an object upon the faculty of representation, so far as we are affected by the said object, is sensation. That sort of intuition, which relates to an object by means of sensation, is called an empirical intuition. The undetermined object of an empirical intuition is called appearance. That to which in appearance corresponds to sensation, I term its matter; but that which effects that the manifold of appearance can be arranged under certain relations, I call its form. But that in which our sensations are merely arranged, and by which they are susceptible of assuming a certain form, cannot itself be sensation. It is, then, the matter of all appearances that is given to us a posteriori; the form must lie already a priori for them in the mind, and consequently can be regarded separately from sensation.*
>
> *I call all representations pure, in the transcendental meaning of the word, wherein nothing is met with that belongs to sensation. And accordingly we find existing in the mind a priori, the pure form of sensible intuitions in*

general, in which all the manifold of appearances is arranged and viewed under certain relations. This pure form of sensibility I shall call pure intuition. Thus, if I take away from our representations of a body, all that the understanding thinks of as belonging to it, as substance, force, divisibility, etc., and also whatever belongs to sensation, as impenetrability, hardness colour etc.; yet there is still something left us from this empirical intuition, namely, extension and shape. These belong to pure intuition, which exists a priori in the mind, as a mere form of sensibility, and without any real objects of the senses or any sensation.

The science of all the principles of sensibility a priori, I call Transcendental Aesthetic.

(A19/B33)

Kant goes on to describe how he is going to strip away from sensibility all that is annexed to it by understanding to arrive at empirical intuition, and then to take away from intuition all that belongs to sensation, leaving pure intuition and the mere form of appearances. From this investigation he claims that,

... there will be found that there are two forms of sensible intuitions, as principles of knowledge a priori, namely, space and time." (A21/B35)

I have reproduced this passage despite its length and difficulty because of its brilliant clarity in separating often conflated terms and because it is crucial to my argument regarding the role of space in Greenberg's analysis of the conditions for painting's autonomy.

Kant's epistemic reversal

The concept of an object, as something that involves us in its constitution, rather than leaving us as mere recipients, via our senses, of epistemes about it, is at the base of Kant's transcendental question,

What is the ground of the relation of that in us which we call representation to the object?

Kant's letter to Hertz, 21st February 1772. Quoted by Gardner (1999, p28).

The question is about the conditions under which objects are possible for us. It is not reducible to the pre-Copernican questions of philosophy, which ask, what are the conditions for an object's being? And, what are the conditions for an object to be known?

This transcendental turn reverses the direction of the vector of knowledge. Instead of the traditional, pre-critical model of representation,

> *If a subject S knows an object O, then the explanation for S's representing O lies ultimately in O's being the way that it is; had O not existed at all or been otherwise, S would not have represented O or would have represented O differently.*

The direction of the flow of knowledge is reversed, so that,

> *—the deepest, most abstract and encompassing explanation of the representation (of the object O) now lies in how the subject S, is.*

(Gardner 1999, p41)

From the epistemic reversal described above it is immediately apparent that Kant's philosophical method is entirely different to both the rationalist analysis of the clarity of ideas or their appeal to the principle of sufficient reason on the one hand and to the empiricist preoccupation with sense experience, for example Locke's Essay Concerning Human Understanding (1690), on the other. It is the difference between Kant and empiricism that is most relevant to the relationship between the ideas of Kant and Greenberg. Kant's methodology is characterised by his painstaking identification of the conditions of possibility for experience: Kant's transcendental conditions. These transcendental conditions must be satisfied <u>before</u> any epistemological relationship between subject and object is even possible, and in this sense, the transcendental conditions are necessary for any and all experience. Kant's detailed argumentation to identify these conditions amounts to a detailed analysis of the ways in which objects must conform to our mode of cognition in order that experience may be validated in Kantian terms. It is this prior examination (critique) of our cognitive powers, which enable us to experience objects, that is so distinctive of Kant's philosophical method and which makes his philosophy critical.

By way of contrast, previous philosophies, which do not undertake a critical examination of the epistemic relationship between subject and object, in terms of the nature of the subject's cognition, are not critical. Such pre-critical philosophical method may lead to correct conclusions but such conclusions are merely dogmatic assertions because they are not premised on the nature of our cognitive powers; they are not, according to Kant, grounded in sound principles. In this essay I suggest that Greenberg's arguments to support his conditions for the autonomy of painting belong to this category; they are not critical in the Kantian sense because they are not grounded in a prior examination of the cognitive powers of the subject. Greenberg's conclusions in Modernist Painting may be correct, but through not being referred to

the nature of the subject's cognition, they are, in Kantian terms, no more than dogmatic assertion.

If, as Kant claims, objects must conform to our mode of cognition then it follows that the cognising subject must take an active part in the constitution of its known objects. In all this discussion it is allowed that there may be objects existing whose constitution is independent of the subject, but it is claimed that we cannot know anything about them. For us to experience objects, according to Kant, not only empirical intuitions but also our pure intuitions of sensibility are required, and our sensibility is subjective because it involves our understanding. The danger now is that if this carrying over from subject to object is pushed too far the object's constitution may collapse back into the mind of the subject, a position identical with that of Berkeley. Kant avoids this problem, and establishes limits to his idealism, by claiming that we are only justified in regarding whatever it is about objects that make it possible for us to experience objects, as being the subject-dependent part of objects. Thus the subject–dependant constitution of objects is no more than that which we predicate on objects in order for it to be possible for us to know them. Therefore knowing and experiencing are subjective and not objective.

The question remains as to what the link is between subject and object that brings part of the constitution of the subject within that of the object in experience of the latter. Kant's assumption is that there are a priori elements in cognition, which form the structure of our object-enabling experience, which are the conditions for us to experience objects. Likewise, the a priori features of objects are those that constitute our object-enabling structure of experience. Kant accepts realism only at the common sense level. We can accept empirical/a posteriori knowledge in everyday affairs, i.e. we can represent the object because of how <u>it</u> is. But we must remain aware, at the philosophical level, that what we are empirically/realistically accepting is only what is over and above the a priori features of objects and is always conditional on those features.

As we have seen already the cognitive power within us that enables objects to be given to us in experience through our senses is called sensibility and the representations that result are called intuitions. These intuitions are immediate, sight as opposed to insight, and incorporate the phenomenological presentation of the object to the subject. By way of contrast, concepts are the means by which we think

about objects and the power within us that enables us to think about objects is called understanding.

The Analytic makes it clear that the mutual dependence of intuitions and concepts is a fundamental proposition of Kantian epistemology because knowledge of an object requires an intuition and a concept. For, as Kant (1781, p68) puts it,

> *Without sensibility no object would be given to us, without understanding no object would be thought. Thoughts without content are empty, intuitions without concepts are blind. It is, therefore, just as necessary to make our concepts sensible, that is, to add the object to them in intuition, as to make our intuitions intelligible, that is, to bring them under concepts. These two powers or capacities cannot exchange their functions. The understanding can intuit nothing; the senses can think nothing. Only through their union can knowledge arise.* (A51/B75)

The two representations of concept and intuition are irreducibly different and cannot, therefore, be collapsed into each other.

As mentioned before, Kant claims that if something is in space and time then it is capable of being experienced by us, and the converse. This does not imply that we all experience a particular object in the same way, but simply that the power to experience spatio-temporal objects in some way is universal. For Kant then, space and time are involved in the link between the world of objects and ourselves in a crucially important way.

The Introduction to the Transcendental Aesthetic focuses on the role of space and time in sensibility. In the Aesthetic Kant claims that space and time provide the sensible form of experience, thus making objects possible for us. This feature of space and time implies that they must differ, in some important way, from sensibility in general. Kant distinguishes space and time from all other sensible experience in two ways. Firstly he claims that space and time are pure a priori intuitions. Secondly he claims that that space and time are only forms of sensibility and are not features of absolute reality. That is to say space and time are part of us, as elements of our cognitive constitution. All the objects that we experience in space and time are simply appearances as opposed to things in themselves, for as Kant (1781, p61) says,

> *What may be the nature of objects considered as things in themselves and without reference to the receptivity of our sensibility is quite unknown to us.*

> *We know nothing more than our own mode of perceiving them, which is peculiar to us, and which, though not of necessity pertaining to every being, does so to human beings. With this alone we have to do.*
>
> (A41/B59)

Kant's conclusions from The Metaphysical Exposition of the Concept of Space (Kant, 1781, p49) are relevant here, and important later in Chapter Two in my discussion of Greenberg's conceptualisation of space.

1. *Space is not an empirical concept that has been derived from outward experiences. For, in order that certain sensations may relate to something outside me (that is, to something which occupies a different part of space from that in which I am); ...the representation must already exist as a foundation. Consequently the representation of space cannot be borrowed from the relations of external phenomena through experience; but, on the contrary, this external experience is itself only possible through the said antecedent representation.*
2. *Space then is a necessary representation a priori, which serves as the foundation of all external intuition .....*
3. *Space is no discursive, or as we say, general concept of the relation of things.....it must therefore be considered as a condition for the possibility of appearances, and by no means as a determination dependent on them...*
4. *Space is represented as to an infinite given quantity .....but no concept, as such can be so conceived, as if it contained within itself an infinite multitude of representations. Nevertheless, space is so conceived, for all parts of space, even to infinity, exist at once. Consequently, the original representation of space is an intuition a priori, and not a concept.*

(A23/B37)

APPENDIX THREE
NEUROSCIENCE

Neurons

Estimates of the number of neurons in the adult human brain fall in the range of ten to a hundred billion, the same order of magnitude as the present population of the world. Each of these neurons is a largely autonomous single cell unit having its own internal "battery" of electrical energy that is re-supplied from the brain energy substrate and is its own on/off switch. Each neuron has a nucleus, which processes electrically encoded information received from its input channels called dendrites that form multiply branched connections – up to about 10,000 in number – to the output channels, called axons, of other neurons within its range of connections. A single neuron has about a million other neurons within range of its root-like system of dendrites but typically only links up with about one percent of all possible connections. The output from a typical neuron is a single axon that is also heavily branched and transmits the neuron's output to the thousands of dendrites of a small percentage of other neurons that are within its range.

Although the output axon of a neuron is multi-branched, each branch carries the same output signal as very short electrical pulses (of only one millisecond rise-time) that gradually decay away. In contrast, the input from the dendrites of other neurons to the nucleus is a wave-form (though not a simple harmonic wave like a sine wave) that is made up of all the thousands of different signals arriving from its dendrites, the branches of which all connect to the axons of different neurons. The signals are received from different "within range" neurons at different times and at different frequencies and are all superposed on each other as they arrive. The integrated result is an ongoing and complex wave-form that can carry very large amounts of information. The output signal from an axon is in the form of a very rapid sequence of discrete pulses, sent one at a time; there is no integrative process in axonal signals. From even this simplified description it is apparent that neurons are not simply elements of a simple electric current conductor; they are not analogous to joined up pieces of copper wire carrying a simple harmonic electric current to a domestic appliance. Each neuron has an integrative function that mediates, compresses, and onwardly transmits the "chatter and gossip" from its 10,000

colleagues.[129] Because neural pathways are seldom purely linear, an individual neuron has a chance of receiving a tiny proportion of its own output back again from other neurons involved in the same loop; such output is never received in the same form that it was sent because it has been integrated with, and mediated by, the other neurons in the circular chain of neuronal events that constitutes the loop. This reflexivity is important; at the meso and macro levels of neuron activity it is extremely important.

Each neuron is always active, but in a variety of states; these states include various degrees of excitation and inhibition and of rest. Even at rest, neurons emit a low intensity pulse lasting for a few milliseconds about once every second. A neuron that has been inactive for more than a few seconds is a dead one and is quickly scavenged by specialised cells to allow room for a new one to grow in its place. Neurons are also capable of "learning" preferred pathways of receiving and transmitting from and to other particular neurons within their range. Studies of the embryonic cortex show that the initial connections between neurons that are sparsely distributed in the neuropil (the grey matter substrate of the brain) are simply chance connections with near neighbours. As the brain grows, so does the complexity of the branched dendritic and axonal connections of the neurons within it, and new connections appear to be less random. The more frequently a particular pathway between neurons is used the stronger the signals transmitted by it. As a result of constant usage, particular pathways become habituated and persist over very long periods of time. Although the broad architecture of these pathways remains recognisably similar over time to experimental observers, changes in detail are also observed. A specific stimulus given to a pathway results in a particular observed pattern of electrical activity, but the same stimulus given a few weeks later results in a very similar but not identical pattern; the brain is constantly modifying its habitual pathways as a result of new experience, and in this sense, nothing is really "hard-wired" about inter neuron activity.

The connections between axonal branches of one neuron and the dendrites of others are called synapses. When an axonal pulse reaches a synapse it releases a chemical, which diffuses into and activates, a "switch" in the cell wall of the receiving dendrite, thus allowing the train of pulsed signals to flow into the receiving dendrite, be converted to wave-form, and subsequently integrated with other dendrite signals.

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[129] Whilst generally unenthusiastic about anthropomorphic attributions, I do not have a problem with them when applied to humans! - Or to the operations of the human mind/brain.

There are, in broad terms, two types of synapse. Inhibitory synapses either reduce the signal strength or reverse its direction of flow altogether. Excitatory synapses boost the signal strength to varying degrees. Both inhibition and excitation functions are essential to neural networks to prevent the system either running down to zero (death) or running completely out of control in ever increasing excitation (also death).

The above sketch of how neurons interact with each other at the micro level is very much simplified. It is intended only to show the potential that even small numbers of neurons have for transmitting, integrating and, above all, mediating through their interdependency with each other, huge amounts of encoded information from the body and from the world. The functional dynamics of neurons viewed at the meso and macro levels are significantly different from the operations described above and are dealt with in the main text. The focus of this chapter is not on the detailed morphology, physiology and electro-chemical properties of neurons but on the reflexive dynamics of their relational inter-dependency (at the micro, meso and macro level) that is crucial to the functioning of a self-organising brain.

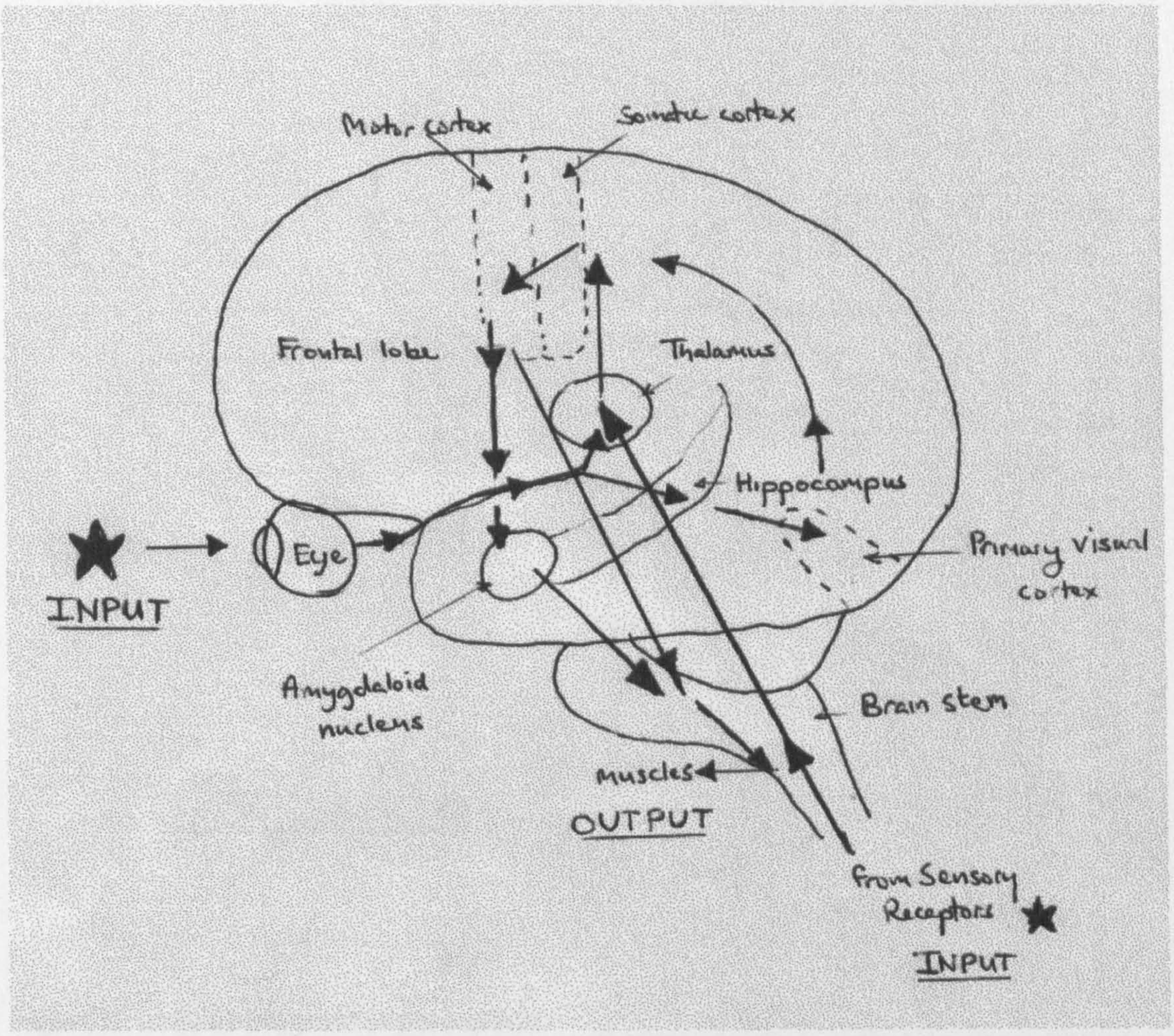


Figure 1: passivist-cognitivist perception

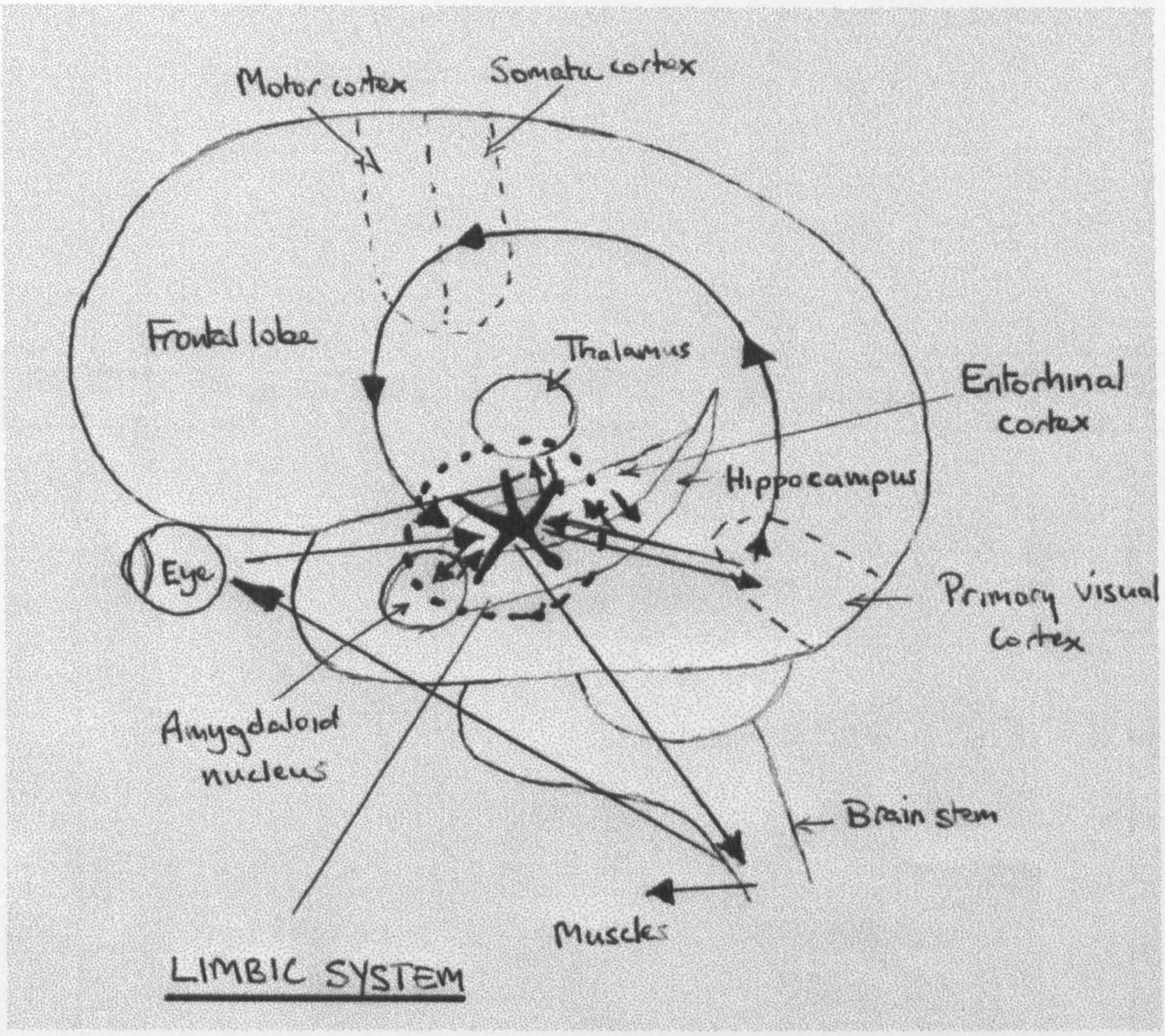


Figure 2: activist-pragmatist perception

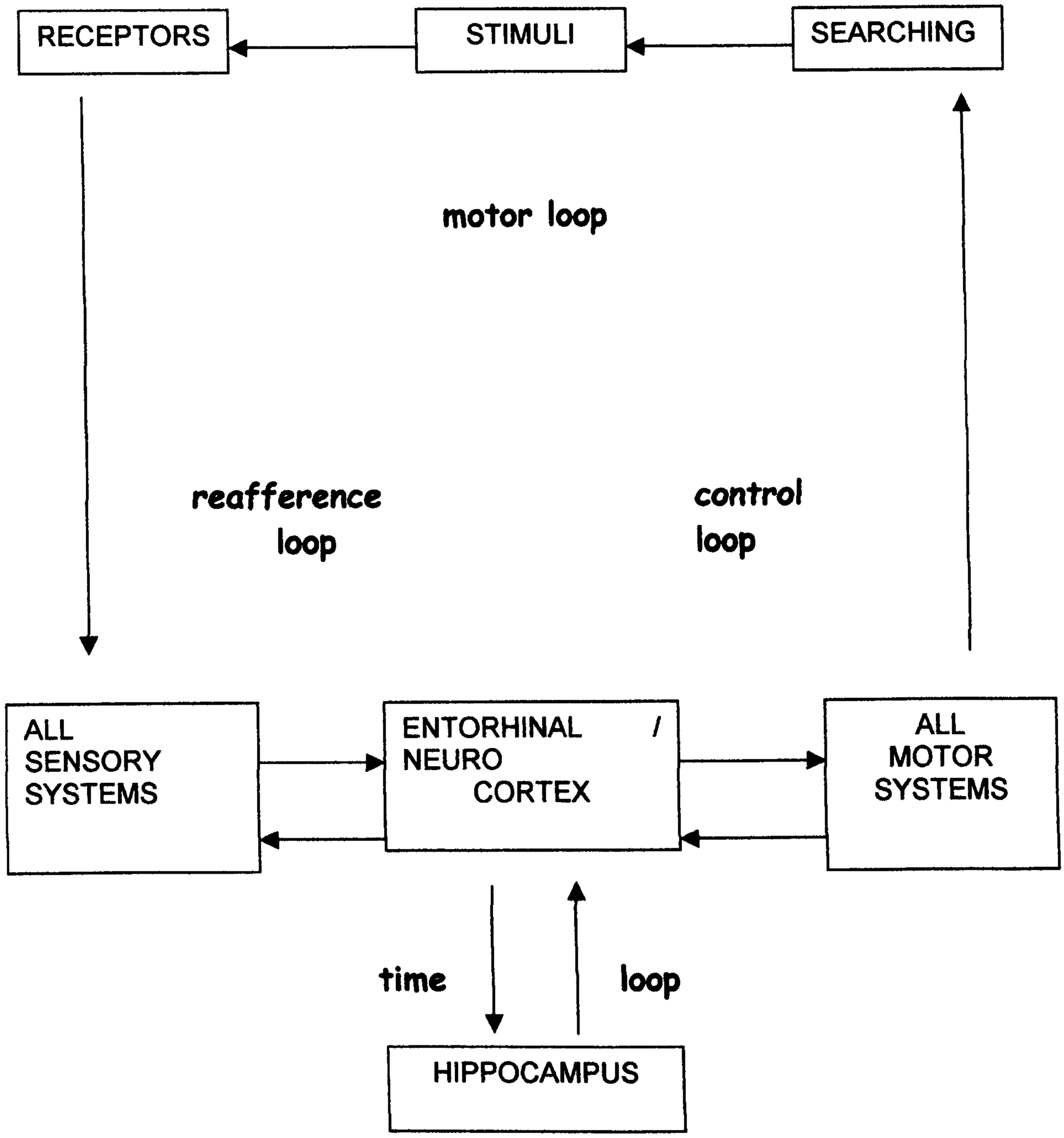
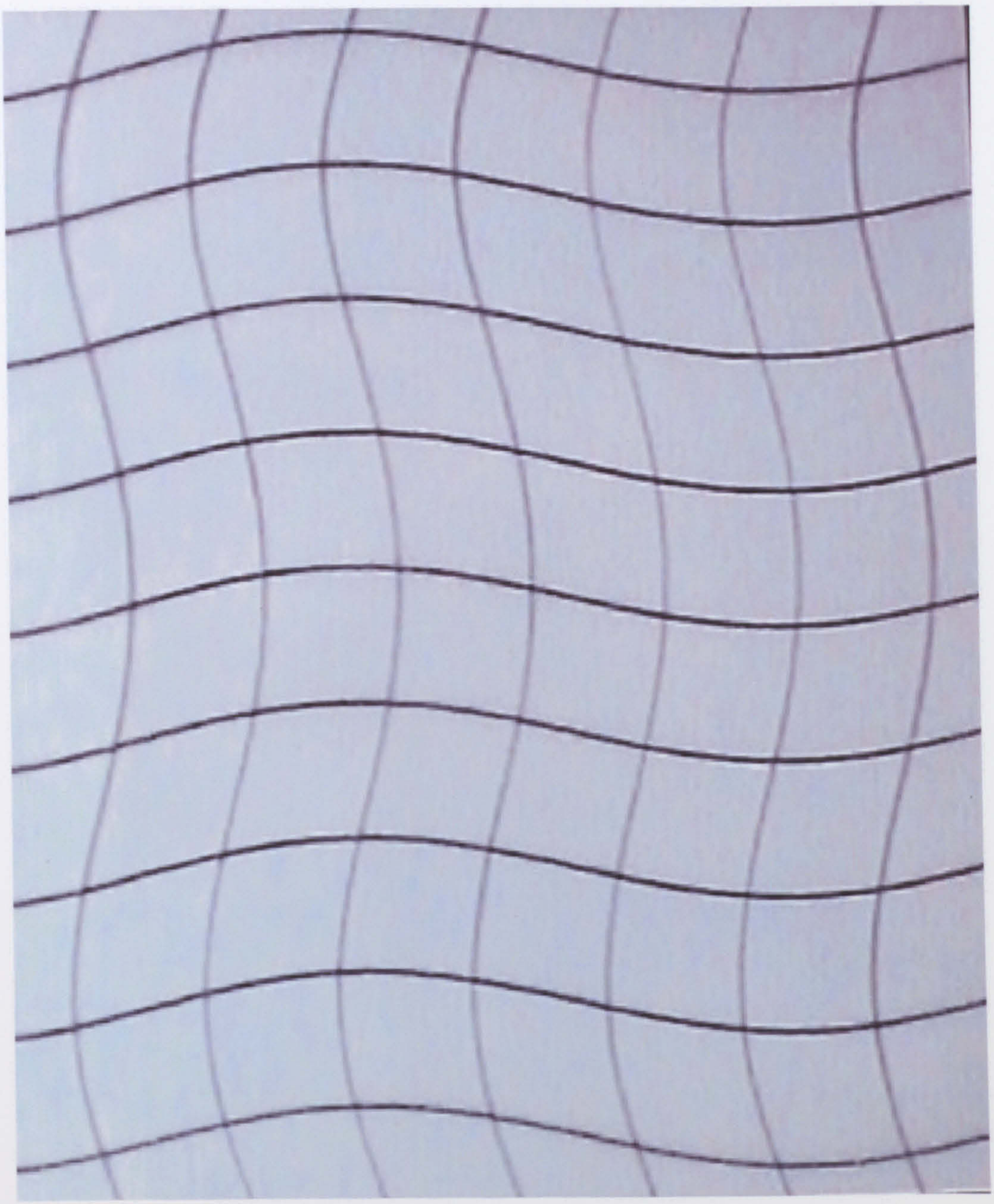


Figure 3: dynamic architecture of the limbic system

PHOTOGRAPHS OF MY PAINTINGS



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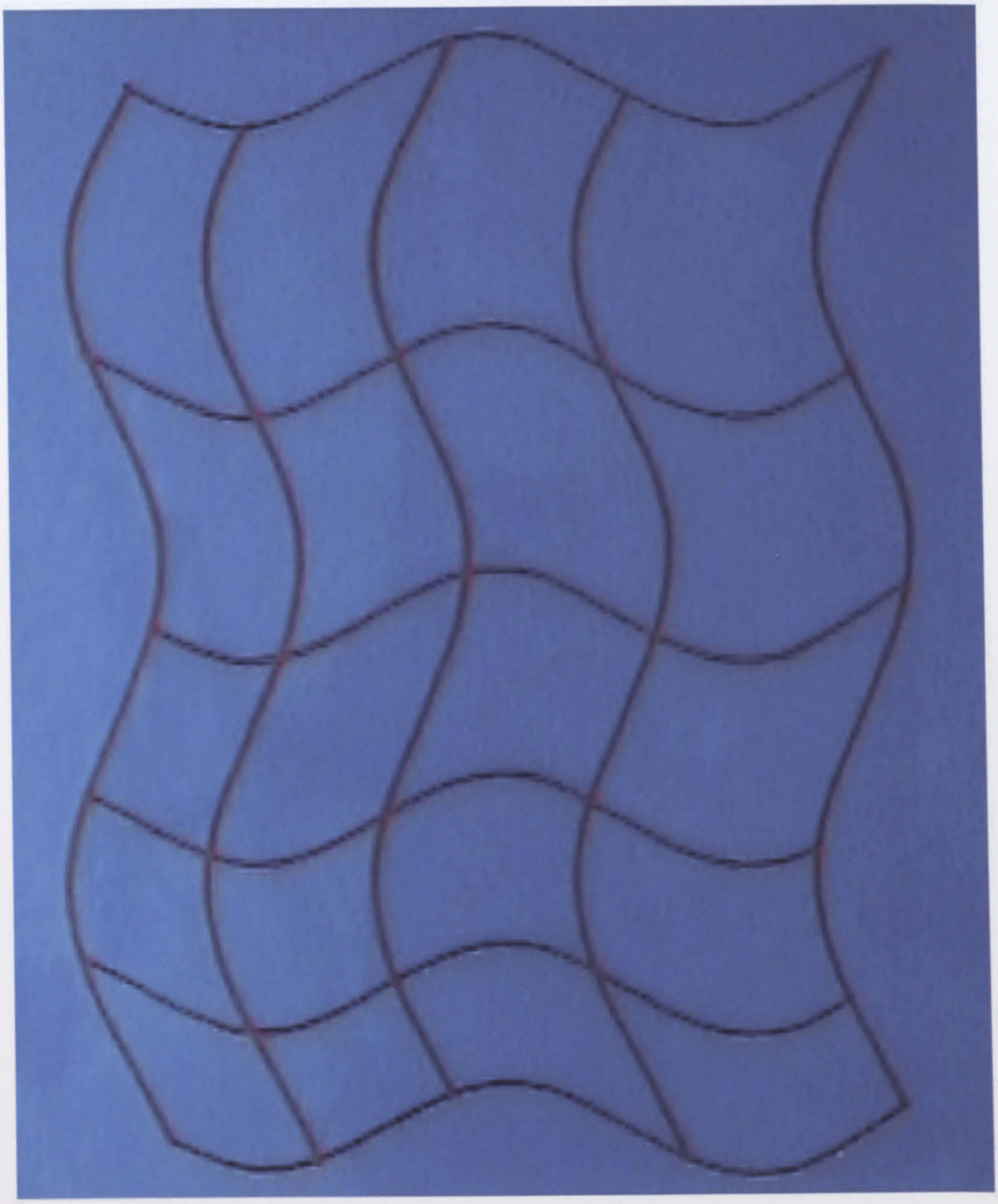

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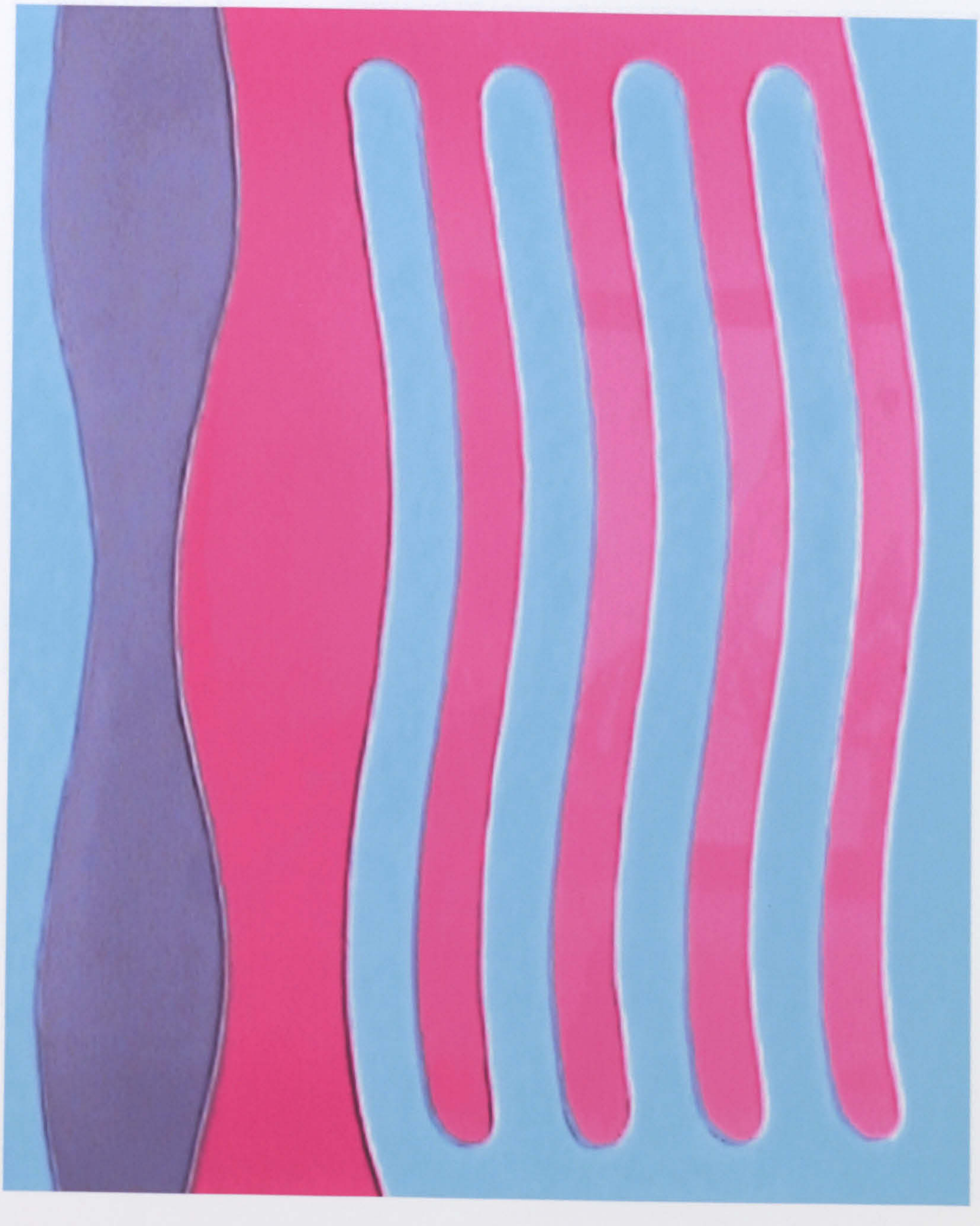

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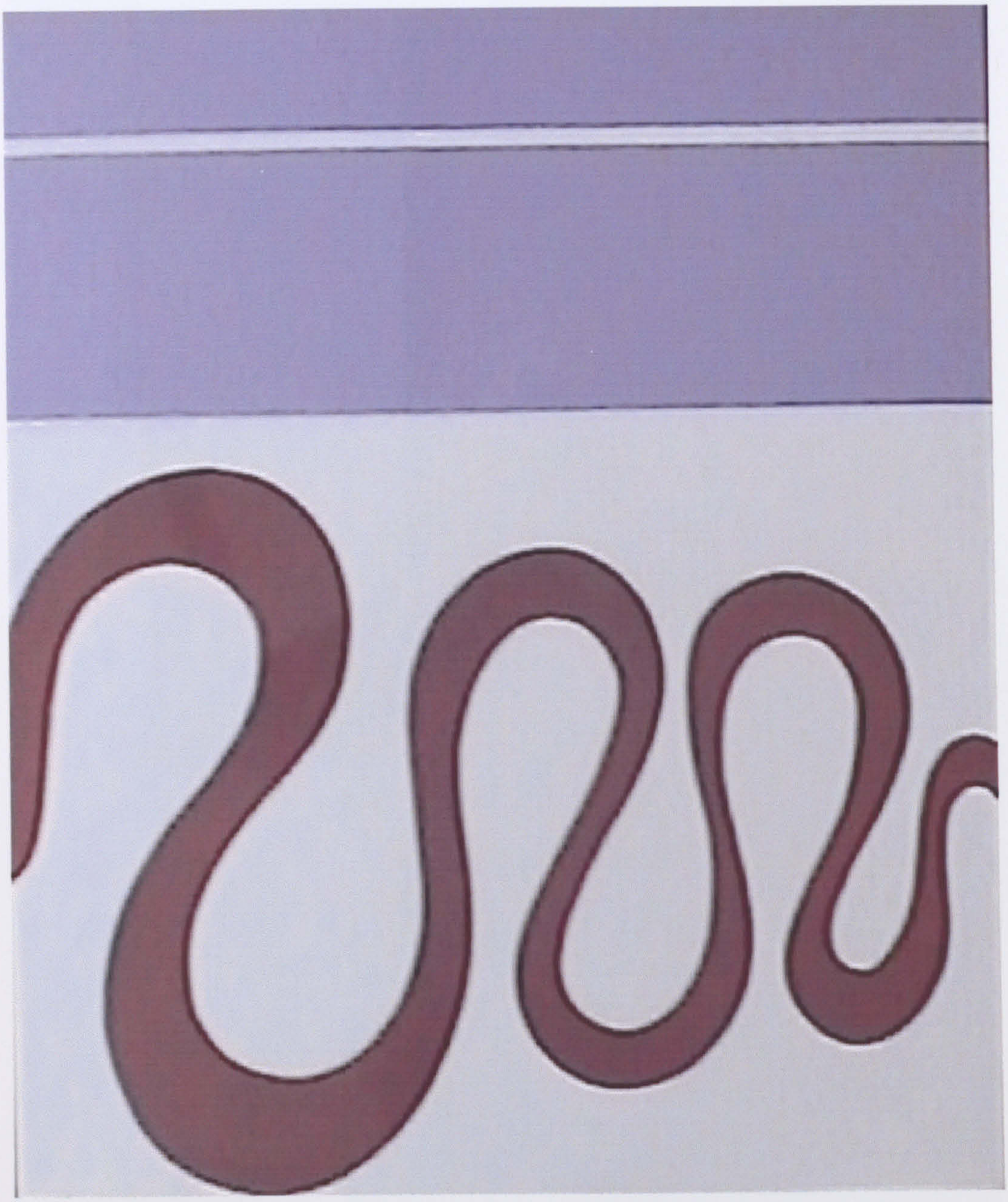

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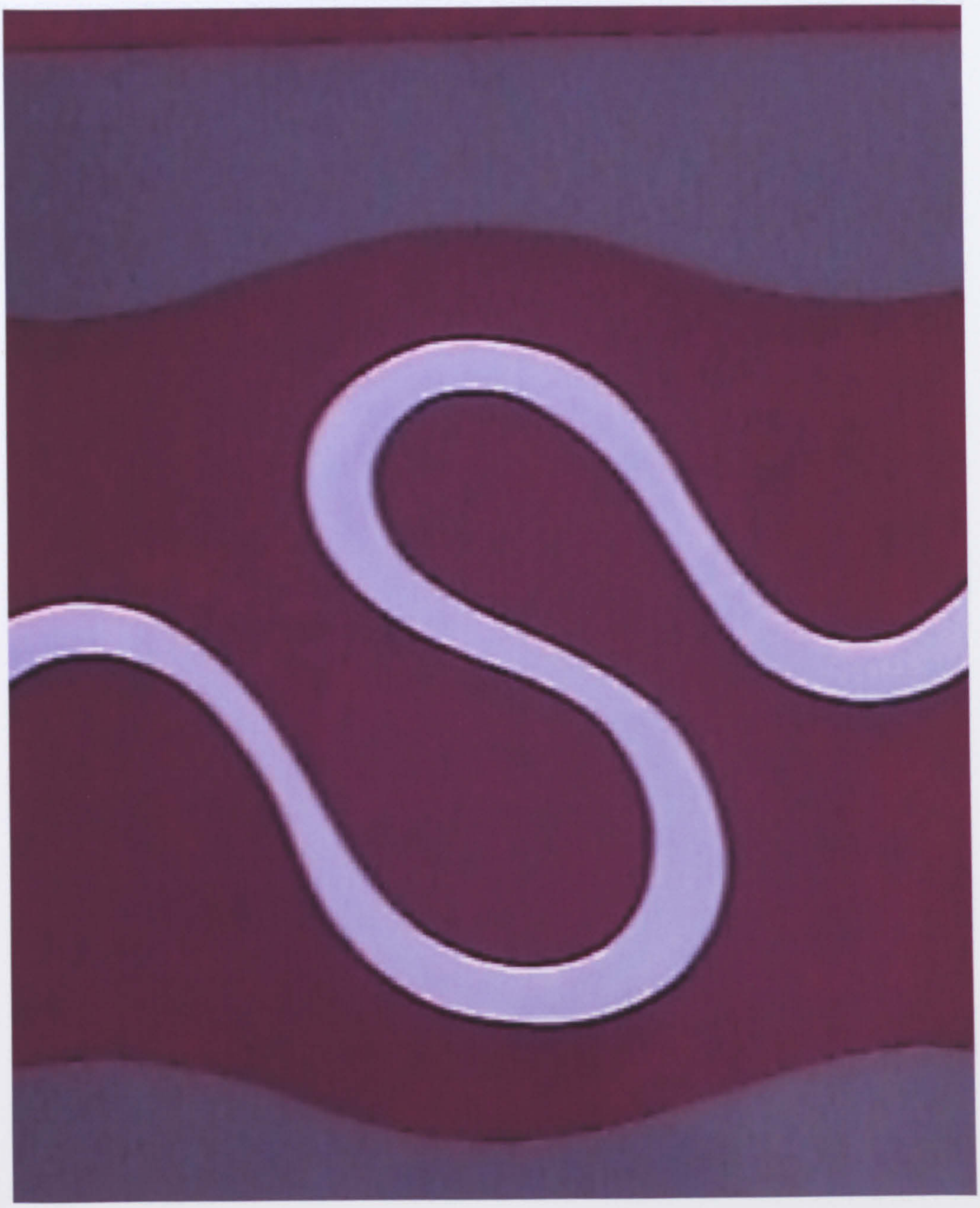

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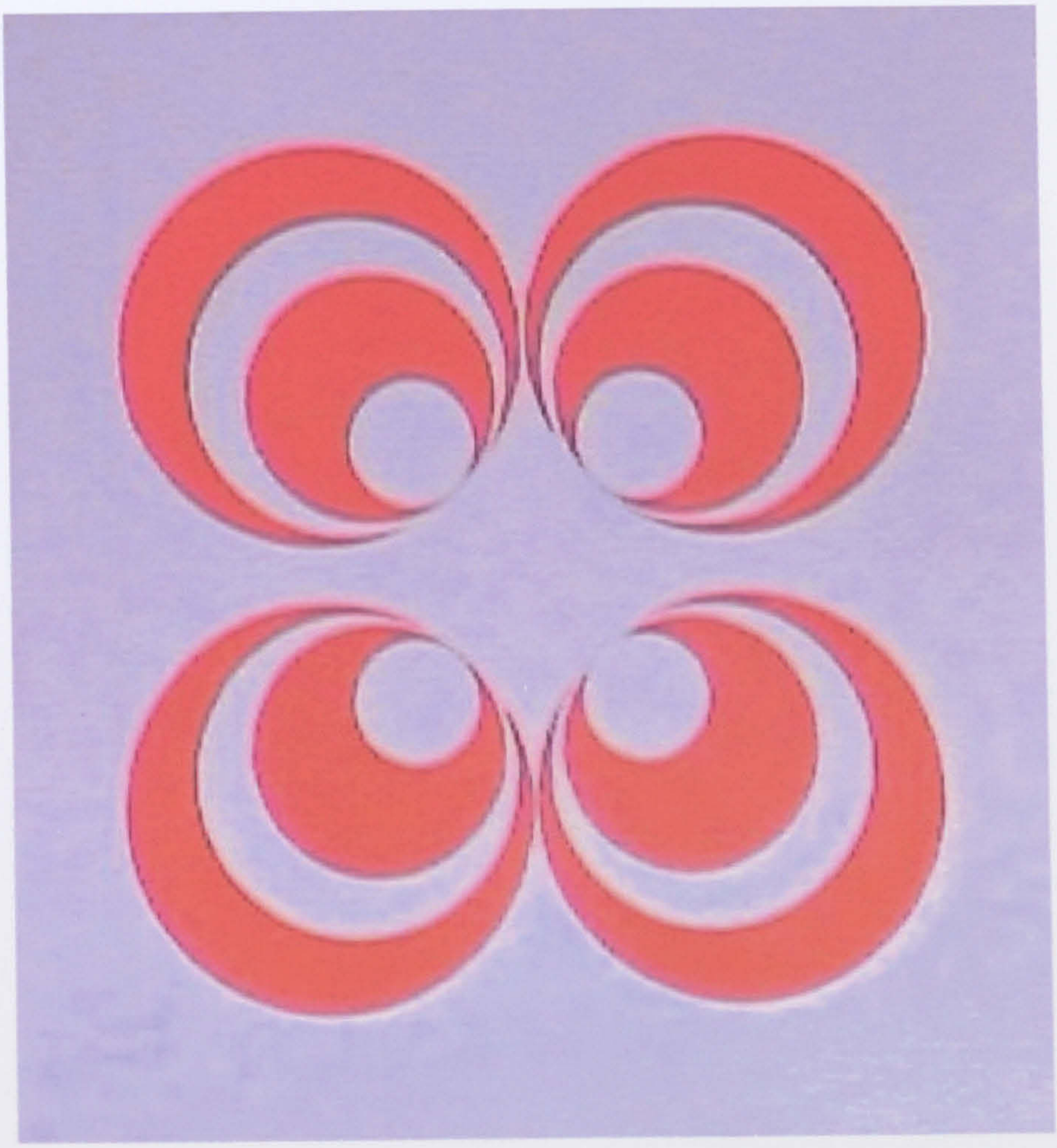

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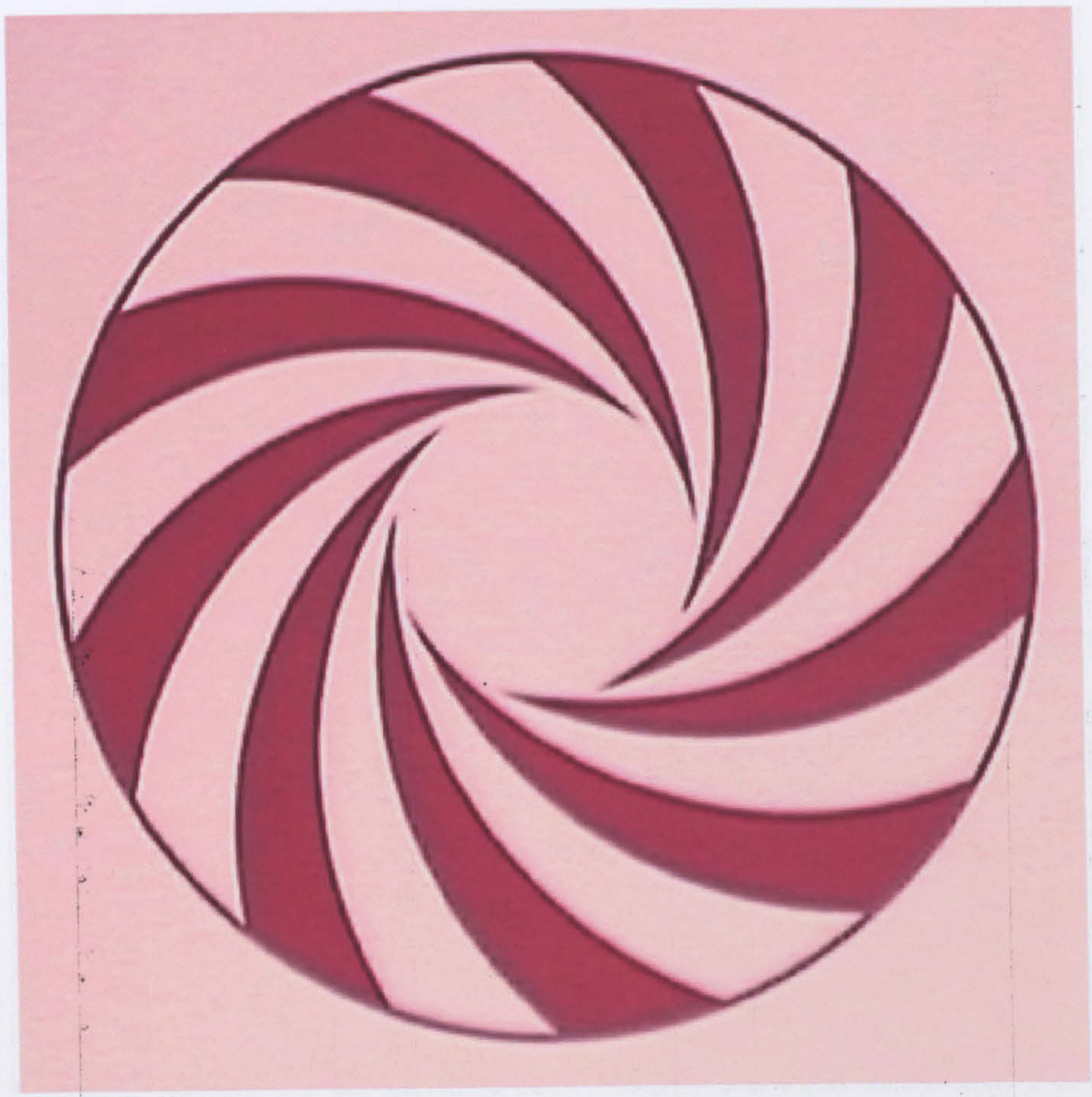

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