IDEAS OF FORM IN AESTHETICS AND SCIENCE

IN ENGLAND

IN THE NINETEENTH CENTURY

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I may not hope from outward forms to win
The passion and the life, whose fountains are within.

Coleridge, "Dejection: An Ode," ll. 45-46.

Contents

SUMMARY

It is now fairly generally accepted that the prestige enjoyed by the scientific observation of nature as a branch of human enquiry influenced style in landscape painting from roughly the mid-eighteenth century to the mid-nineteenth century. Professor Bernard Smith, in his European Vision and the South Pacific 1768-1850, a Study in the History of Art and Ideas, has shown how the Neo-Classical tradition of landscape Painting gave way increasingly before demands for less stylised representations and a greater degree of verisimilitude. In this, the opening up of the South Pacific by explorers like James Cook played an important part. The taste for typical landscape -- the exact imitation of characteristic natural features of a particular locale -- grew under the influence of topographical and general natural history sketching, as practised by those whose duty it was to record the findings of scientific expeditions.

Now the opening of the Pacific provided a new world for

> the philosophers of nature. But it was the empirical approach of the [Royal] Society and not the neo-classical approach of the [Royal] Academy which flourished under the impact of the new knowledge won from the Pacific. For though the discovery of the Society Islands gave initial support to the belief that a kind of tropical Arcadia inhabited by men like Greek Gods existed in the South Seas, increasing knowledge not only destroyed the illusion but also became a most enduring challenge to the supremacy of neo-classical values in art and thought. The effect of this challenge is to be observed in painting, in poetry, in the theatre, and even in ideas concerning the nature of the universe. The opening of the Pacific is therefore to be numbered among those factors contributing to the triumph of romanticism and science in the nineteenth-century world of values.[1]

My own study did not, however, grow out of an interest in Professor Smith's book. I was unaware of the direct relevance of this until my own thesis was well advanced. I first became interested in the question of the relationship between science and aesthetics, particularly the formal aspect, from an acquaintance with the writings of Vernon Lee and Roger Fry, and from the collection of essays on form edited by Lancelot Law Whyte, mentioned in the Preface to the present thesis. I wished to establish in what way, and under what conditions the change in world-view that the aesthetics of these writers suggested had come about, and how traditional formal aesthetics had been influenced by the biologically-oriented ways of thinking which had gained such unprecedented ascendency over philosophical thought in the nineteenth century. It seemed curious that the metaphor of organism, always associated primarily with Romanticism, had

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1. Op. cit., Oxford Paperbacks 1969, p. 1. Originally published Oxford 1960.

survived the Darwinian revolution and the consequent failure of what is generally accepted as the Romantic world-picture, to become one of the basic principles of modern criticism. (Evolutionism, on the other hand, would appear to be suffering an eclipse nowadays in the sphere of aesthetics.) It was partly in an effort to unravel these two threads of thought in particular, — organicism and evolutionism — and to assign to their proper relationships the ideas on form associated with them, that research was begun. Principally, however, I was interested in the collapse of the Romantic universe with its strong infusions of panentheism and Platonism, and what this collapse and the advent of relativism and Darwinism implied for formal aesthetics. A changed attitude to form in natural science, it seemed probable, would engender a counterpart in formal aesthetics.

What emerged from the study was the fact that the line of influence from the natural sciences to aesthetics was by no means a simple, direct one. The attempt to render a clear picture of the relationship of the two during the period was impeded by the great revolution caused largely by the development hypothesis in the realm of natural science itself, and by the very gradual advance of the materialistic ideas which led up to it. Besides this, the conservative reaction to the suggestion of evolution forced aesthetics, if not quite to double back on its tracks, at least to expend considerable time trying to refurbish outworn ideas. Briefly, the picture, when

simplified to a mere diagram, shows us a period of advance at the beginning of the century, followed by one of uncertainty lasting until roughly the 'seventies, and, finally, with the triumph of evolutionism and biologically-based thought, the fulfilment in different terms of what had been promised at the outset of the century.

At the commencement of the century, we find the Romantics reacting against the static, mechanistic world-view of Paley and orthodox Newtonian science generally. Coleridge and Wordsworth leaned markedly towards the vitalistic theories of radical thinkers like Maupertuis and Erasmus Darwin. It was this vital, organicist view of nature which became the basis of their aesthetic, superseding to some degree the mechanistic Neo-Classical tradition. This represented a considerable progress, although neither Wordsworth nor Coleridge was ready to accept the radical new theory also put forward by Maupertuis and Erasmus Darwin — that of the evolution of species. Ultimately, they clung to the traditional world-view, and to traditional aesthetics. But their aesthetics evidenced a greater preoccupation with what was new in science than had hitherto appeared.

As will be shown later, the radical vitalistic approach and the organic metaphor were both to recede before an aesthetic based by men interested in more conservative science on the Associationist psychology and classical (especially imitative) theories which were constantly reworked to accommodate the new empiricism. It was Ruskin

above all who championed this view, which continued popular until well past the mid-century. The work of Ruskin and of Eastlake, which was on similar lines, reflects the primary interest of the natural science contemporary with it. This was the determination of the principles of formal criteria in accordance with the absolutist view of the universe.

The re-emergence of the organic metaphor, shorn of its vitalism, and the re-establishment of aesthetics on a new biological basis, was achieved only after the decay of both vitalism and the absolutist world-view and the acceptance of Darwinism in the last decades of the century. It appears, then, firstly, that while evolutionism flourished among advanced thinkers early in the century, it did not affect aesthetics until it became generally received opinion late in the century. While the Romantics were adventurous aestheticians for their day, they drew the line at the development hypothesis. Secondly, the organicism that we associate with art criticism at the close of the century and after, does not seem to be precisely the organicism of the Romantics. With them, it is pre-eminently a vitalistic (in the sense of spiritualistic) concept; with their successors, a metaphor for organization which carries few, if any, overtones of the numinous. Two of the problems which motivated this study, then, disappear if we bear in mind that the Romantics, though possessing a marked scientific bent, were yet, on the question of evolution, conservative. In addition, while

evolutionism re-opened the path for the return to the organic metaphor, by changing the fundamental attitude in biological studies from formal classification to the study of the function of form, it had also stamped out the remnants of vitalism, so that the new organic metaphor, as re-introduced by Vernon Lee, Roger Fry and others, was distinct in its application and connotations from that employed by the Romantics. Finally, influence from the natural sciences on formal questions in aesthetics is, in fact, consistent throughout the century, though not consistently or statically from one scientific school of thought. Changes in scientific outlook are mirrored in changes in aesthetic thought, and the overall developments in both are complementary. With the estrangement of Paley's watchmaker from his machine and the laying of the spirit in the active universe of the Romantics comes, after a period of uncertainty, the founding of a new relativist aesthetics of form. Form no longer finds its function as the implement of a divinely-ordained symbology, but as a factor in the biological life-process of an anthropocentric universe.

This thesis contains no material which has been accepted for the award of any degree or diploma in any university, and, to the best of my knowledge and belief, contains no material previously published or written by any other person except that which I have duly acknowledged in the text or bibliography.

Explanatory Note

This thesis does not represent an attempt at original scholarship in the field of the history of science. The scientific background for the discussion of aesthetic ideas of form throughout is based on generally accepted works of historians of science. No one author's view has been adhered to exclusively, but the facts presented are the result of consideration and comparison of the widest possible range of secondary material. In addition, various key-works in late-eighteenth- and nineteenth-century natural science have been consulted, as well as relevant scientific articles in the leading journals of the period. Titles of these are recorded in the notes and bibliography.

Acknowledgements

I wish to thank my supervisor, Dr R. V. Johnson, for his sympathetic help. Professor C. J. Horne, who acted as my supervisor in Dr Johnson's absence, offered valuable suggestions and criticisms, as did Professor J. A. Colmer. I am grateful to my sister, Barbara McConnell, who typed the final draft of the thesis, and to the staff of the Barr Smith Library Inter-Library Loan Section whose industry made a considerable quantity of material available to me. Finally, my thanks are due to my former tutor, Tim Wares, who helped me get started.

PREFACE

In 1951 a collection of essays, edited by Lancelot Law Whyte, was published, outlining the new attitudes to morphological studies in various departments of thought evolved by the middle of this century, under the influence of methods of investigation and description of phenomena in the natural sciences. In his preface to this edition of Aspects of Form, Herbert Read has this claim to make:

> ...the revelation that perception itself is essentially a pattern-selecting and pattern-making function (a Gestalt formation); that pattern is inherent in the physical structure or in the functioning of the nervous system; that matter itself analyses into coherent patterns or arrangements of molecules; and the gradual realisation that all these patterns are effective and ontologically significant by virtue of an organisation of their parts which can only be characterised as aesthetic — all this development has brought works of art and natural phenomena on to an identical plane of enquiry.[1]

The pre-eminence of interest in studies of form above other

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1. Aspects of Form: A Symposium on Form in Nature and Art, ed. Lancelot Law Whyte, London 1968, pp. xxi - xxii.

considerations is, of course, not the invention of the twentieth century. It can be traced back to the development of interest in the basis of classification of natural phenomena which grew steadily during the eighteenth century to become one of the foremost preoccupations of the natural sciences in the nineteenth. During this period, too, we note an increasing prestige in the natural sciences themselves. At the beginning of the nineteenth century a metaphysically-based absolutist philosophy still sought to create theories and then mould the findings of natural science to fit them. But as time went on, and with the coming of Darwinian evolutionism, this tendency gave way before the upsurge of interest in a new relativistic attitude, and increasing reverence for the inductive method. In short, metaphysics gave way to materialism and the desire to give a complete explanation of the phenomena of the universe in purely natural terms.

The combination of these two elements — formalism and the desire to explain everything simply in its relation to the natural order — had important results in all departments of the aesthetic thought of the period, especially, perhaps, in the psychological aspect of aesthetics. While the immature state of the psychology of the period did not allow advances in aesthetics beyond a certain point, it is possible to discern in the work of such aestheticians as Vernon Lee and Roger Fry (the work of the latter actually falls mainly within our own century) the first steps

toward the position now taken by thinkers like E. H. Gombrich and Rudolf Arnheim. In focusing attention strictly on form and on the mental and emotional states connected with aesthetic perception, they helped to pave the way for the new attitude to form that could only come to full maturity with the development of the Gestalt theory of psychology.

In the following chapters, the developments which culminated in the work of Vernon Lee and Roger Fry are traced from their most immediate origins. It is possible to distinguish in the writings of most nineteenth-century aestheticians preoccupations of a type to be expected from a consideration of the two main trends of thought mentioned above. Continuously, throughout the century, there is a movement towards the shedding of the philosophically- or religiously-founded and the classical formalist aesthetic traditions in favour of the adoption of more scientifically accurate methods of aesthetic legislation. At first, the attempt takes the form of a desire to cling closely to what scientific observation can show us of the truths of natural appearances, and this is pursued to the point of becoming prejudicial to the achievement of an adequate science of aesthetics. But with the advent of Darwinism — the coming-of-age of science it almost seems — a new, more deeply-considered and critical approach to the development of aesthetic science is discernible. These more mature efforts implemented two of the greatest achievements in nineteenth-

century thought -- the idea of organicism and the evolutionary hypothesis. The aestheticians who took up these lines of enquiry made more than the relatively naive use of them that had been the lot of the attitudes to description of natural form imported into aesthetics from the natural sciences earlier. With the closing decades of the century comes the realisation of the validity of purely formalist studies as the core of aesthetic science and the recognition of the world of art as an autonomous one, functioning in accordance with its own natural laws. If this did not as yet quite bring works of art and natural phenomena onto an identical plane of enquiry, it brought them much closer together and much more nearly aligned in to their true relationship than had been the case under the classical tradition, when aesthetics was still a minor branch of philosophy, and art the imitation of nature.

Chapter I

THE SIGNIFICANCE OF FORM IN NATURE

Preliminary

In A History of European Thought in the Nineteenth Century, published 1904-1912, and still the standard work in its field, J. T. Merz repeatedly stresses the tendency toward unity of thought in the nineteenth century. For example,

> ...England has for the first time in her history produced a system of philosophy -- that of Mr Herbert Spencer; and this with the distinct understanding that the object of philosophy is the unification of knowledge.
> ...what our century has done is this: it has worked out...a clearer view of the correct methods for extending knowledge, and a peculiar conception of its possible unity.[1]

It was not, however, through the offices of Spencer's philosophy alone, popular though this was in its day, that the most notable attempts at unification of thought were to come. In this, he was overshadowed by the achievements of his great contemporary in biology, Charles Darwin. It was Darwinism, that is to say, the

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1. Op. cit., New York 1965, Vol. I, pp. 45, 29.

implications to be drawn from Darwin's theory of evolution by natural selection and the pattern for enquiry set by his scientific methods, that infiltrated other areas of thought and gave rise to new trends of approach. This fact was acknowledged by the Victorians themselves. G. J. Romanes, in The Scientific Evidences of Organic Evolution, remarks,

> ...it is generally recognised that the Origin of Species has produced an effect both on the science and the philosophy of our age which is without a parallel in the history of thought...[1]

However, Darwinism was not the only natural scientific factor to affect philosophical thinking. The century witnessed as well a great revolution in geology and attacks on the belief in vitalism. This is to single out only three of many major upheavals in the scientific thought of the time, but these three seem most relevent to the subject under discussion at present, that is, changes in aesthetic ideas about the significance of form.

If it is true, as Merz claims, that the tendency in the nineteenth century was toward unity of thought, that is, toward the development of a unified conception of the world in which philosophy harmonises with the findings of science, it should be possible to demonstrate in the case of any one idea in philosophy that it was, at the least, consonant with contemporary views in science. This

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1. Op. cit., London 1882, p. 1.

is more especially possible in attempting parallels between the world of aesthetic thought and the world of the natural sciences. T. H. Huxley, in his essay, "Owen's Position in the History of Anatomical Science," refers to "that capacity for exact observation which is the foundation of both art and science."[1] Agnes Arber, in The Mind and the Eye: A Study of a Biologist's Standpoint, notes that "The morphologist's standpoint is set midway between that of the mechanistic sciences and of the arts...."[2] These opinions would tend to suggest that we might reasonably expect aestheticians and biologists to possess something of the same attitude of mind to the world of natural objects which is the basis of both the plastic arts and natural science. Further, with this common area of interest acknowledged, we might expect aestheticians to be influenced in some way by the findings of their counterparts in the sciences. That this is so must be obvious to anyone who has read the works of writers on aesthetics who also practise in the plastic arts, such as Sir Joshua Reynolds or Sir Charles Eastlake. And scientists have displayed, at times, the reverse process: Sir Charles Bell, famous as a physician, wrote a book on the anatomy

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1. In The Life of Richard Owen, by Richard Owen, London 1894, Vol. II, p. 285.

2. Op. cit., Cambridge 1954, p. 125.

of human expression, as a guide to painters and sculptors, as well as contributing an essay on the human hand to the Bridgewater Treatises. The artistic talents of von Humboldt are another obvious case of this dual faculty.

But it is not merely — or even largely — a common interest in the anatomy of the human figure and natural objects generally that forms the link between the natural sciences and aesthetics in the nineteenth century. The general methods and leading ideas of natural science at different times and in varying ways and degrees have played their part in determining the drift of aesthetic thought. This is nowhere so evident as in the huge interest in the aesthetic theory of form which can be seen throughout the period, culminating, significantly, in attempts to build a whole science of aesthetics on a notion of the perception of form. It is the history of this interaction of the natural science and aesthetics of form, particularly with regard to the light this throws on aesthetic ideas of the significance of form in the natural world, that we will now consider.

As was said before, the three major influences on aesthetic ideas of form were changes in the way of thinking about geology, evolutionism and vitalism. It would appear, then, that a brief sketch of the progress of these three interests is the next step in our exposition.

Geology

One of the first facts that springs to mind about the nineteenth century is its oft-proclaimed failure of faith. As the century opens, the world picture is still the typically eighteenth-century one of God directing the workings of his marvellous machine. The universe runs regularly, according to the natural laws of the God who created it, and the beauty and wise planning of the objects in the natural world signify to men his benevolent providence. This is the view — well known — of William Paley, whose Natural Theology and Works went through, literally, some dozens of editions up to the 1880's. In the 1830's, Paley's works were replaced in the centres of higher learning by the Sermons of Bishop Butler, through the influence of the anti-Utilitarian, Adam Sedgwick. It was at about this time, 1834-36, that the Bridgewater Treatises, commissioned in 1825 by Francis Egerton, Earl of Bridgewater, began to appear, proving the power, wisdom and goodness of God in matters as diverse as the physical laws of the universe, digestion and the design of the human hand. The ideas of Paley, Butler, and their followers remained popular through most of the century, but by 1870, even Paley had to be brought up to date to include the newest findings in the natural sciences, and the sober-minded took natural theology less and less seriously as time went on.

Geology was perhaps the first science to shake the foundations of belief in the benevolent, purposeful creation. Before it could do this effectively, of course, it had to shake off its own supernatural beginnings. Until 1785, when James Hutton's Theory of the Earth appeared, the first work to describe the creation of the present state of the globe as having been brought about by a series of gradual changes due to natural causes, the entire British geology was based, ultimately, on Thomas Burnet's Sacred Theory of the Earth. According to Burnet and his followers, God had created the earth about 4000 B.C., and all geological phenomena, such as fossils, faults in stratification and mountain ranges, which were not then produced, were to be accounted for by the action of the later Noachian deluge. This theory, advocated strongly by Robert Jameson, professor of natural history and keeper of the museum in Edinburgh, held such sway over the minds of the British geologists that Hutton's theory gained very little acceptance for some considerable time. Also influential in retarding the acceptance of Hutton's theory was the tremendous prestige of the catastrophist and Neptunist, Abraham Gottlob Werner, who maintained that all rocks were derived from sedimentary deposits by water. These together combined to establish what were to be the two main beliefs in geology up to about the 1830's: that geological changes were due to either catastrophes — brief, violent upheavals — or to the deposit of sediments by water. Milton Millhauser, to

to whom I am partly indebted for this sketch, writes in his Just Before Darwin: Robert Chambers and 'Vestiges', that British geology at this time

> ...derived not from field studies (which simply imposed the necessity of constant revision) but from revelation; its logic and its principles were the outgrowth of uncritical assumptions. Even after it had partially disengaged itself from its Scriptural involvement, British geology wore the mark of its origin in its inherent tendencies and fundamental form.[1]

Furthermore, it continued to be argued that God's hand guided all the works of creation, even though it now appeared that he had caused not one flood, but many.

But the theories of Neptunism and Catastrophism did not go entirely unopposed. Hutton's Theory of the Earth was not only Uniformitarian in approach, as has been mentioned above, it was also Vulcanist or Plutonist, that is, it emphasised the importance of heat, as well as water as an agency in the formation of the earth's crust. Above all, Hutton saw the processes of geology as involving immeasurable lengths of time, as his much-quoted conclusion shows: "...we find no vestige of a beginning, — no prospect of an end." But the acceptance of Hutton's theory was only very gradual. His advocate, John Playfair, through his Illustrations of the Huttonian Theory of the Earth which was published in Edinburgh

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1. Op. cit., Middletown, Connecticut 1959, p. 41.

in 1802, succeeded in popularising his theory to some extent, and William Smith's stratigraphic map of Great Britain, published in 1815, confirmed the details of it, but even after about 1810 when Hutton was beginning to be accepted, the opposition, which had been initiated by Richard Kirwan in 1793, continued. Uniformitarianism, with its disclosure of the great age of the earth and its limited and remote involvement of the creator with his world, did not really come into its own before Lyell's classic Principles of Geology finally appeared in 1830.

But the general progress of geology was bringing to light discrepancies between scripture and the empirical findings of the science. This gave rise to a series of attempts to reconcile the scriptural with the geological record. This was begun by Archbishop Sumner of Canterbury in 1816, with his Treatise on the Records of Creation. Even with the coming of Lyell's Principles the Scriptural geologists were not to be silenced. If anything, this seemingly complete victory for uniformitarianism spurred them to still greater efforts. Nor were these attempts to reconcile geology with scripture confined to the backward and uninformed. Reputable and prominent geologists such as Buckland and Conybeare entered the arena, and the question was examined in several of the Bridgewater Treatises. This matter has been explored by C. C. Gillispie.[1] The details of

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1. Genesis and Geology, Vol. LVIII of the Harvard Historical Studies, Harvard 1951.

the dispute are unimportant for the present thesis, though a fascinating study in themselves. Here, it is enough to remark that from the appearence of Lyell's book in 1830 to that of Robert Chambers's Vestiges of the Natural History of Creation, forty or more writers attempted a reconciliation of the two conflicting giants. The appearance of Vestiges seems to have intensified the ferment caused by geological undermining of scripture, even though Chambers offered his views in a spirit of purest piety, for over sixty books on the subject appeared between 1844 and 1859, the year of publication of the Origin of Species. It was this later period that saw the emergence of books by such prominent scientists as Adam Sedgwick, William Whewell and Hugh Miller. After 1859, the question continued to be argued, but more and more ground was ceded to science. It became less and less imperative to insist on God's role in the creation, and the fundamentalists eventually dwindled from view.

> Neptunists and catastrophists set themselves a task which ultimately proved self-contradictory. They accorded complete philosophic validity to whatever results Baconian induction might bring them; and they also required these results to display the structure and development of the material world as the history of an intending Providence with a moral purpose, as physical evidence not only of God's power but of His will and His immediacy. However firmly they might insist that Genesis was not designed to teach the truths of science, or the Geological Society to teach the truths of morality, still truth, as Sedgwick felt, could not be inconsistent with itself. The central thread of interpretation became finer and finer. One by one its strands were broken and the weight of demonstration put upon those remaining — the six days of creation, the six-thousand-year span of earth history, the birth of our present globe in a primeval diluvium, the antiquity and original parentage of species, the dynamical efficacy of divinely ordained cataclysms, the flood itself.

> Finally the conception of a divinity who must continually interfere with his arrangements in order to prove himself a governing force depended on the immutability of different manifestations of life. This was the one remaining strand. Publicists of the school of theological science rushed to hang upon it, and of course they hanged themselves with it.[1]

This brings us to the discussion of the next of our three scientific questions: the progress of evolutionary theory in the nineteenth century.

Evolution

Geology, (including palaeontology) if it had achieved nothing else, would still have made a very great contribution to evolutionary science in establishing the enormously lengthened time-scale needed to fit in the huge number of slight mutations that brought about the development of the various species according to Darwin's theory of evolution. It served Darwin, too, by establishing a record of fossil forms of life out of which a geneology of species could be drawn. The theory of evolution or transformation of species was not original, of course, with Charles Darwin. Theories of evolution had been known to the ancients, but the first modern figure to be credited with anything like a coherent (though extremely speculative) theory is Charles Bonnet. Most historians of science prefer to begin the history of

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1. Op. cit., repr. as Harper Torchbook No. 51, New York 1959, pp. 146-47.

modern evolutionary theory with the posthumously published Telliamed of Benoit de Maillet, but Bonnet's views, if not precisely evolutionary in the modern sense, at least had many features which pointed the way towards the ideas of later evolutionists.

Bonnet, a firm believer in the benevolent providence of God, thought that nature was ever moving toward a higher goal. This goal had already been reached on other planets, where sensitive plants, talking animals and angelic humans existed. He believed that the forms of animals were in the beginning quite unlike what they now appear, but have altered through a series of stages of the earth's development. Each stage was terminated by a natural catastrophe, the last being that which destroyed the earth before the six days of creation referred to in the book of Moses. Bonnet's idea of the "Great Scale of Being," in which no species is sharply defined, but all shade into one another, was also a predisposing factor toward the later notion of mutability of species.

Far more fantastic than this account -- and intentionally so -- was the production of de Maillet. In his Telliamed, published in 1748, he puts forth the view that all land life is derived from previous aquatic forms. Man is derived from mermen as is evidenced by the tale of a traveller who had seen the reverse process in action -- a Hollander who had become a "sea-man" and who was covered in scales and had hands like fins.

But other, more sober efforts at achieving a satisfactory

theory of evolution were soon to appear. In 1751, Pierre-Louis Moreau de Maupertuis published his Système de nature under the pseudonym of Dr Baumann of Erlangen. His treatment of evolution was not, like de Maillet's, as literary fantasy, but as a biological exposition of the mutability of species. Though still speculative, it can be considered the first scientific treatment of the idea.

It was Maupertuis's work that prompted Denis Diderot to develop further some similar speculations of his own. These had appeared first in 1749 in Lettres sur les aveugles, but were more fully presented in his Pensées sur l'interpretation de la nature, 1754. As Millhauser remarks, the view of Maupertuis and Diderot

> ...was congenial to the spirit of a culture that had fathered the "Great Chain" concept and could tolerate a mechanistic view of man; it might encounter theological censure, but not a pervasive intellectual antipathy springing out of the very roots of the age. It was — outside of solemn and official circles — favourably received; among the philosophes and literati of the Enlightenment, it had its audience and won its friends. The chief obstacles to its success (aside from its frankly hypothetical character) were technical: an arbitrary and archaic theory of heredity and the rigid Linnaean classification of species....By the end of the century, evolution had attained to something like a minor vogue in France — the vogue, of course, of an interesting and attractive speculation that could hardly pretend to proof; in England it was at least taken seriously, recognized as a possible conclusion of modern science.[1]

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1. Op. cit., p. 64. A mechanistic or materialistic view supposes that the universe, organic and inorganic, is composed of particles of matter having the power of self-movement. The implications for transmutation of species are obvious. "What is there to prevent these intelligent and sensitive elementary particles from varying infinitely from the order which constitutes the species?" Denis Diderot, Oevres complètes, Vol. II, pp. 45-49, trans. in H. W. Piper's The Active Universe, London 1962, p. 20.

In England, it was certainly taken seriously by one of the foremost men of science of the day, Erasmus Darwin, grandfather of Charles Darwin. Erasmus had probably been influenced by the writings of Georges-Louis Leclerc, Comte de Buffon. Buffon had hinted ironically that species might not be immutable, but evaded coming into the open with a full-blown theory of evolution. But the hints were apparently enough for Darwin who devoted a chapter of his Zoonomia, 1794-96 to the subject. His theory also appeared in the notes to The Botanic Garden and The Temple of Nature, his two long poems, the latter of which was published posthumously. Like Maupertuis, Diderot and Buffon, Darwin was a mechanist or materialist, (though nowadays we would think of him as a vitalist, as will be explained later)[1] and he believed that

> ...all animals have a similar origin, viz. from a single living filament; and that the difference of their forms and qualities has arisen only from the different irritabilities and sensibilities, or voluntarities, or associabilities, of this original living filament, and perhaps in some degree from the different forms of the particles of the fluids, by which it has been at first stimulated into activity. And that from hence, as Linnaeus has conjectured in respect to the vegetable

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1. Darwin believed in a "spirit of animation" or "animal life which mankind possesses in common with brutes." Zoonomia, London 1794, Vol. I, p. 109. He professed himself ready to accept that powers such as gravity, magnetism, etc., might be "matter of a finer kind," and that the ultimate cause of all motion was immaterial, i.e., God. It is probably wisest to think of most "materialist" or "mechanist" theories of this time, before the question was settled by accurate experiment, as at least easily reconcilable with vitalism. The Romantics, especially Coleridge and Wordsworth, apparently found them so. See H. W. Piper, op. cit.

> world, it is not impossible, but the great variety of the species of animals, which now tenant the earth, may have had their origin from the mixture of a few natural orders.[1]

Zoonomia had a considerable success, was translated into German, French and Italian and was "honoured by the Pope by being placed in the Index Expurgatorius" as his grandson, Charles, observed. But it also drew forth, within four years of its appearance, Thomas Brown's Observations on the Zoonomia of Erasmus Darwin, condemning Darwin's work for its materialism. England had just witnessed the excesses of the French revolution, and anything that smelled of "French materialism" or "French atheism," the doctrine behind the revolution, was nervously rejected. Just how suspicious the British became of materialism is obvious when we consider that the introduction below was needed to recommend a translation of the Animal Kingdom of Cuvier, anti-evolutionist and vitalist though he was:

> ...a charge has been brought against zoological science as delivered to us by the scavans [sic] of Germany and France: it is asserted that it has been made a vehicle for the insidious poison of infidelity. That it has no natural adaptation to such an end is certain, that it has been perverted to such a purpose, is, we fear, too true. Our author at least, in our minds, stands clearly acquitted of such a charge, but his views of science have been distorted by others to the prejudice of religion, a distortion which has, perhaps been facilitated by an occasional want of precision in his style, it has been our particular care in every individual instance of such perversion, to show its utter inapplicability to such an end. It is not the heavens alone that "declare the glory of God," nor the firmament only "which sheweth his wondrous works."

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1. Op. cit., pp. 498-99.

> His omnipotence, wisdom, and his superintending providence, are equally manifested in the meanest worm that creeps upon the earth, and in the lowest of the radiated tribes that slumber in the coral caves of the sea.[1]

Brown's book plus some unfavourable reviews turned the tide against Zoonomia, and by the second decade of the next century, Darwin's works were largely forgotten.

But, in addition to Lamarck in France, whose work gained little acceptance due to Cuvier's hostility, further speculators on evolution appeared. Three more physicians took up the thread. The first of these, William Charles Wells, suggested that variation in characteristics such as immunity to disease and skin pigmentation might be the result of natural selection. William Lawrence published his Lectures on Physiology, Zoology and the Natural History of Man in 1819, in which the characteristics of man were shown to be the result of selected breeding. Unfortunately, Lawrence evinced no respect in it for the establishment and the book was suppressed, having created a considerable furore. J. C. Prichard's Researches into the Physical History of Mankind, 1813, put forth theories similar to those of Wells and Lawrence, but by the third edition of the book, 1836-47, Prichard had retracted the portions on natural selection.

Thus the status of evolution had not greatly changed up

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1. The Animal Kingdom, Arranged in Conformity with its Organization, by the Baron Cuvier,...with Additional Descriptions of All the Species...by Edward Griffith, London 1827, Vol. I, p. xi.

to the time of the publication of Robert Chambers's Vestiges of the Natural History of Creation. It was "in the air;" it was a speculation unsupported by evidence, but respectable enough as scientific theory to call forth regular refutation from orthodox scientists, and piquant enough in its implications to remain a source of never-failing interest to the general reader. When Vestiges appeared, the first considerable attempt to set out the theory and adduce evidence sufficient for its proof, the reaction to it was overwhelming. In spite of the piety of its author's presentation, the book was censured for its godlessness. Yet Chambers's anxiety to avoid this probably helped get the book its very wide hearing. It was a shocking theory, yet offered as reconcilable with a benevolent providence:

> The system of nature assures us that benevolence is a leading principle in the divine mind. But that system is at the same time deficient in a means of making this benevolence of invariable operation. To reconcile this to the recognised character of the Deity, it is necessary to suppose that the present system is but a part of a whole, a stage in a Great Progress, and that the Redress is in reserve. Another argument here occurs — the economy of nature, beautifully arranged and vast in its extent as it is, does not satisfy even man's idea of what might be; he feels that, if this multiplicity of theatres for the exemplification of such phenomena as we see on earth were to go on forever unchanged, it would not be worthy of the Being capable of creating it. An endless monotony of human generations, with their humble thinkings and doings, seems an object beneath that august Being. But the mundane economy might be very well as a portion of some greater phenomenan, the rest of which was yet to be evolved.[1]

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1. Op. cit., The Victorian Library, Leicester 1969, p.385. (Reimpression of first edition 1844.)

In spite of its many errors in points of fact, its ridiculous examples of "spontaneous generation," and the able and persistent opposition of Hugh Miller, Vestiges went through four editions in six months and ten editions in ten years, selling nearly 24,000 copies. It was translated into German and Dutch, but above all, it helped clear the way for Darwin's Origin by fending off the first cold blasts of the reviewers and stirring up the already smouldering embers of interest in the topic of evolution.

Darwin had spent twenty years on his notes and was still unwilling to publish when news came of something he had been dreading all this time. Alfred Russel Wallace, an English naturalist in Malaya, wrote to Darwin setting forth his own similar theory for Darwin's comment. But a compromise was effected. A joint memoir by Darwin and Wallace was read before the Linnaean Society on July 1, 1858. Neither naturalist was present at the meeting and the paper raised no discussion. But with the publication of the Origin over a year later, the atmosphere changed dramatically. The book was popular — for a scientific work — and, Gertrude Himmelfarb notes, by 1876, when the Darwinian "revolution" was pretty well completed, it had sold 16,000 copies.[1]

But this is the positive side of the picture. The theory

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1. Darwin and the Darwinian Revolution, New York 1959, p. 243.

had to overcome considerable opposition before it gained the wide acceptance and prestige it later enjoyed. In this, Darwin was lucky in having as his champion, T. H. Huxley. By means of articles and reviews, no less than the famous clash with Wilberforce, Bishop of Oxford, he put down the angry objections which the Origin, predictably enough, had raised. As Alvar Ellegård, in his Darwin and the General Reader,[1] notes, the Origin caused alarm on two heads. Although the descent theory, according to Darwin, could be reconciled with benevolent providence, it was now possible to explain the creatures of the natural world as produced by accident, and therefore not due to divine intention or design. Secondly, the modifications that produced the diversity of nature might be thought of as merely due to the operation of natural laws without God's intervention. For the reconcilers of scripture and science, the final thread had snapped.

But the triumph of Darwinism by the 1880's did not mean only the death-blow to serious attempts to prove benevolent design. It brought a great weight of prestige to two still-new approaches to scientific thought. These were the limiting of enquiry and drawing of conclusions to matters of fact which could be empirically confirmed, and the use of field study and experiment as the prime

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1. Op. cit., Gothenburg Studies in English, Vol. LXIV, No. 8, Gothenburg 1958, p. 127.

method of enquiry. In other words science became finally disentangled from metaphysical speculation. From science, these trends spread by analogy into other areas of thought — eventually into aesthetics. Furthermore, there now arose a new attitude to the question of form. Previous to the Origin there had been intense interest in description (morphology, comparative anatomy and classification.) Now form and interest in form were seen as products of the common life-process.

Vitalism

Another factor that assisted the recession of metaphysics from scientific thought was the gradual disappearance of vitalism. Vitalism has a long history, reaching back as far as Aristotle, but for the present purpose it will be sufficient to begin with the reaction of the French thinkers, Maupertuis and Diderot, against the Newtonian theory of the inertness of matter. Diderot's views, expressed in Rêve d'Alembert and De l'interpretation de la nature, were based on those of Maupertuis. Diderot was ready to concede, though with some reservations on religious grounds, that Dr Baumann's (Maupertuis's) active, sensitive particles of matter might explain "...the most incomprehensible mystery of nature, the formation of animals, or more generally of all organized bodies...." But

> ...we are surprised that the author...has not seen the terrible consequences of his hypothesis...I ask if the universe, or the whole collection of feeling and thinking molecules, forms a whole or not. If he replies that it does not, he shakes with that word the foundations of belief in the existence of God, by introducing disorder into nature.... If he agrees that it is a whole...he must admit that in consequence of this universal amalgamation, the world, like a huge animal, has a soul; and that, as the world may be infinite, this soul of the world, I do not say is, but may be an infinite system of perceptions, and the world may be God....

However this theory is "...a bold attempt on the universal system of nature and the sketch of a great philosophy."[1] Professor Piper has perceived a significant ambiguity in the vitalistic theories of Diderot and other French thinkers:

> This theory in which the 'soul of the world' is a system of individual perceptions and sensibilities in matter is very different from Newton's 'ubiquitous God constituting duration and space' who appears as the world-soul of Pope and Thomson; Diderot, of course, was making an indirect attack on Deism. Even so, the 'universal system of nature' thus expounded had two faces: it made the universe altogether material and, since matter had the qualities of spirit, wholly spiritual.[2]

An English thinker who believed similarly in the active powers of matter was Erasmus Darwin. He is certainly a vitalist by our standards, but in his own day was condemned for the materialistic views he expressed in Zoonomia. Darwin thought that the whole of nature was composed of spirit, which produced motion, and matter, which received motion. The motions of matter were of three main

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1. Diderot, loc. cit.

2. Op. cit., p. 21.

classes — gravity, chemistry, and life, but he allowed a fourth class which included "...supposed ethereal fluids of magnetism, electricity, heat and light; whose properties are not so well investigated as to be classed with sufficient accuracy." In Darwin's world, mind and matter are so intermixed as to be capable of mutual influence beyond what we could now accept, as this passage on sexual reproduction shows:

> ...the imagination of the male at the time of copulation, or at the time of the secretion of the semen, may so affect this secretion by imitative or sensitive association...as to cause the production of similarity of form and of features, with the distinction of sex; as the motions of the chissel of the turner imitate or correspond with those of the ideas of the artist.[1]

Thought, with Darwin, is a physiological phenomenon. It is due to qualities of motion or contractility which are inherent in the fibres of the organs of sense.

Prior to Darwin's theory by about seven years was that of Johann Friedrich Blumenbach, who produced what is usually considered the most lucid work on vitalism to appear in Germany. He explained his theory in two short works: Institutiones physiologicae, which gives the outline, and Über den Bildungstrieb, in which this is elaborated. In these he describes the "vires vitales," irritability, sensibility, contractability, which combine with the "vita propria," the vital activity appropriate to each

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1. Op. cit., pp. 5, 519.

part, to regulate the functioning of the body. Blumenbach also describes the "nisus formativus" which directs the growth and conservation of organic form. This last, like the force of gravity, is known from experience of its effects; its cause remains hidden. This was probably the clearest pronouncement achieved for vitalism. The work of the Naturphilosophen popularised the idea without clarifying it.

Its popularity lasted through the early decades of the nineteenth century until it came under severe criticism from several scientists. The most outspoken and influential of these were H. Lotze and Emil du Bois-Reymond. In his article "Life and Life-Force," in Wagner's Dictionary of Physiology, 1842, Lotze argues that the notion of "life-force" is inadmissible because no natural event has only one cause. The formative impulse can never explain anything, because it does not operate according to any apparent law. Du Bois-Reymond spoke against vitalism in the introduction to his Untersuchungen über tierische Elektrizität, 1848. His approach is that of a physicist, and he submits that man can never know how it may be possible for matter to think. It is thus sounder to confine enquiry to what can be verified. Force is to be thought of not as the cause, but as the measure of movement.

In a brief sketch of this kind, it is impossible to include detailed examination of the progress of vitalism. But some factors which led to its eventual all-but-complete disappearance

were, the rise of materialism with the appearance of Ludwig Buchner's Kraft und Stoff in 1855; the discovery of the Law of Conservation of Energy and other achievements in physics by men like Sir George Stokes, Tyndall, Faraday and Lord Kelvin, which helped dispose of the old, confused notion of "force;" the perfecting of microscope techniques; and the advent of Darwinism. To sum up, it is safe to say that, by mid-century, vitalism was under heavy attack and already going out of fashion.

From the foregoing remarks on the progress of geology, evolutionary theory and vitalism, it can be seen that two developments took place by the middle of the century that were significant for ideas of form in the natural world. In the first place, the orthodox notion that the natural world had been created and was functioning due to the benevolent providence of God was severely shaken. It was no longer as securely possible after the revelations of geology and biology outlined above to approach the forms of nature with whole-hearted wonder at the beauty and perfection of God's works, nor was it possible to see them now as types of a better world. All was now possibly the product of mere blind chance. Secondly, it was no longer possible to feel that nature and the divine mind behind it were one. With the loss of belief in a vital force, expressions of belief in a life moving perceptibly through the universe it had created, ceased. The forms of the natural world no longer bodied forth the "forms of things unknown."

Aesthetic Ideas of the Significance of Form in Nature

With these two developments in mind, let us follow the course of aesthetic ideas of the significance of natural form. If our basic assumption is correct, that the nineteenth century was an era marked by unity of thought, it should be possible to show a parallel development in the serious aesthetic thought about the significance of natural form during the period. Up to about the middle of the second decade of the century we should expect to find an interest in the significance of form in nature, but this should remain untroubled by controversy about the origin of natural form. We should expect a quickening of this interest, and a recognition of the implications of uniformitarianism from about the thirties, intensifying in the late forties and fifties. Not only was this the time when the Vestiges furore was at its height, but the interest in devising systems for classification in botany was extremely marked, about forty new systems — "the parade of systems" — were proposed at this time. Moreover, the interest in morphology and comparative anatomy was very strong at this time, after the famous debate between Cuvier and Geoffroy Saint-Hilaire, which many interpreted as being between the fixity and mutability of species. More will be said about this in a later chapter on the Analysis of Form. On the whole, during the period to 1860, we should expect to find

the popularity of the arguments for benevolent providential design sustained, with interest aroused in the relation of this and the new geological record from about 1816 onwards, and some doubts about divine providence by about the middle of the century. After 1860, especially from the seventies onward, with the firm establishment of Darwinism, we should expect a lessening of interest in arguments for design and a certain loss of confidence in the relevance of natural form to the moral and religious life of humanity. Together with this there should be attempts, following the recommendations of Darwin and Spencer, to find a more exclusively scientific approach to the problem of the significance of natural form, and one that, operating within the limited context of nature, would offer a naturalistic explanation of human reaction to natural form.

The first major nineteenth-century writer on the significance of natural form is Wordsworth. If it seems an odd proceeding to begin an essay in aesthetics with the opinions of a poet, it must be remembered that major writers on the significance of form early in the century were few. It is true that Alison had appended a little paean to the creator at the close of his Essays on the Nature and Principles of Taste, but the Associationists mostly confined themselves to the psychology of the perception of the beautiful, not its larger implications. Apart from the Associationists, there were handbooks on painting and landscape gardening where practical instructions were the chief end. And, representing

popular opinion, there was, of course, Paley, who was no aesthetician. It would perhaps be helpful at this point to recall the drift of Paley's argument about the natural world in order that the uniqueness of Wordsworth's contribution to thought on nature may be more clearly appreciated.

To Paley, writing in the Newtonian tradition of a world of dead matter functioning like a vast machine under mechanical laws laid down by a remote creator, the natural world is best likened to a watch. The wisdom and benevolence of its creator is testified to by the excellent adaptation of parts to ends, and the beauty and emblematic significance of natural objects are given little consideration. As to the form of these, Paley thinks that only design can explain it; mere chance or evolution are out of the question. In Paley's lifeless world there is room neither for the vitalistic growth implied by the "internal moulds" of Buffon, nor for the "essential forms" of the Greeks. Nor can matter be generated spontaneously. Everything issues simply from the creator's design and takes form, according to mechanical laws, at his behest:

> One atheistic way of replying to our observations upon the works of nature, is to tell us, that all which we see must necessarily have had some form, and that it might as well be its present form as any other. Let us now apply this answer to the eye, as we did before to the watch. Something or other must have occupied that place in the animal's head.... But that it should have been an <u>eye</u>, knowing as we do what an eye comprehends, ——...that this fortunate conformation of parts should have been the lot, not of one individual out of many thousand individuals, like the great prize in a lottery, or like some singularity in nature, but the happy chance of a

> whole species: nor of one species out of many thousand species, with which we are acquainted, but of by far the greater number of all that exist; and that number under varieties not casual or capricious, but bearing marks of their being suited to their respective exigencies: — that all this should have taken place, merely because something must have occupied these points on every animal's forehead; or that all this should be thought to be accounted for, by the short answer, "that whatever was there must have had some form or other," is too absurd to be made more so by any argumentation....
>
> There is another answer which has the same effect as the resolving of things into chance; which answer would persuade us to believe that the eye, the animal to which it belongs, every other animal, every plant, indeed, every organised body which we see, are only so many out of the possible varieties and combinations of being, which the lapse of infinite ages has brought into existence; that the present world is the relic of that variety; millions of other bodily forms and other species having perished, being by the defect of their constitution incapable of preservation, or of continuance by generation. Now there is no foundation whatever for this conjecture....[1]

The orderly form of nature suggests to Paley that it is as God at first created it, and the unity of plan of the universe, including the unity of plan of animals, proves the unity of the creator. Wordsworth, taking an entirely different line, rejects the static universe of Paley. It is not of a "dead machine" that he speaks, but of an "active universe." And the beautiful forms of this universe are types of a higher reality. Although Wordsworth's account of the significance of natural form is neither in foundation or method ultimately scientific, but visionary — and

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1. The Works of William Paley, Vol. V, pp. 42-44.

that is to say, in his case, metaphysical and religious — he was nevertheless attuned to contemporary trends in science. In his early career as poet, he was writing at a time when geology had as yet raised no disturbing doubts about the accuracy of the scriptural account of creation. Evolution was certainly "in the air", but, apparently, this element in French materialism did not attract Wordsworth, though the notion of a vital spirit informing all the matter of the universe did. This is not inconsistent when we consider that, though credited with being purely a pantheist in his youth, he always considered himself a christian. Nor is materialism inconsistent with a religious-visionary view of nature, as Professor Piper has shown.

That Wordsworth understood science to the point of feeling competent to discuss it is obvious from his and Coleridge's plan for a long philosophical poem. It must be remembered that the Romantic poets were writing at a time when all of philosophy, in the broadest sense, was still immediately unified. Later, as has been implied, philosophy in the broad sense was split into discrete areas of interest, to be recombined, it was hoped, into a coherent, unified system on principles derived from the natural sciences. Reviewers of Robert Hunt's book The Poetry of Science, which appeared in 1844, and went through several editions, had some reserves about his assertions of the unity of poetry and science, but there seemed no essential conflict between poetry and science to Wordsworth. Much

of science, as has been suggested of biological science, was yet in the speculative stage. A learned philosophical poet therefore felt competent to theorise on a vast range of subjects, and to do this through poetry was to achieve the additional end of carrying one's message alive to the heart of one's audience. The experience of man was to be recreated whole; his intellectual faculty was not to be split from his feeling life by philosophical and scientific discussion, though these were shaping forces behind the re-creation of experience through the poetry. The scheme was, of course, never completely realised, but Wordsworth went a deal of the way towards it. It would be wrong, as everyone is now aware, to read Wordsworth as a naive observer of nature and humanity.

It is not to the purpose here to present source studies; much already has been attempted in that field by others. Nor is any especially subtle re-interpretation of Wordsworth's ideas of the significance of form possible. But for the sake of clarity it is necessary to mention briefly the relevant points in Wordsworth's thought about natural form.

It was said before that Wordsworth believed in an active universe. This means that he literally believed that all matter was infused with spirit, that it had a life of its own. The quality of life, or motion, as Diderot and Robinet saw it, was the organizing principle that gave to matter its forms. This belief is not to be taken at a superficial level as the product of mere fancy.

Wordsworth is deprecating youthful extravagance when he says in the Prelude that, in his young manhood, he gave a "moral life" even to the stones of the highway. In this instance he is concerned with the play of whimsical sentimentality. Wordsworth had a belief in the animate nature of matter that went much deeper in his mature thought. It is possible that Wordsworth's view of the world as infused with life, and of natural form as existing chiefly for the soul owes something to Bishop Berkeley, who was much admired by Coleridge.

> To suppose sense in the world would be gross and unwarranted. But locomotive faculties are evident in all its parts....the phenomena and effects do plainly shew there is a spirit that moves, and a Mind or Providence that presides. This Providence, Plutarch saith, was thought to be in regard to the world what the soul is in regard to man.
>
> The order and course of things, and the experiments we daily make, shew there is a Mind that governs and actuates this mundane system, as the proper and real agent and cause....
>
> ...Pythagoreans and Platonists...saw...that bodies exist only in a secondary and dependent sense: that the soul is the place of forms....[1]

This belief in the vitality of matter is his reason for speaking of the soul as well as the form of natural objects and linking them in the spectator's perception. The beginning of his childhood education was outdoors, among the "Beauteous forms or grand" of nature:

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1. The Works of George Berkeley, Bishop of Cloyne, ed. A. A. Luce and T. E. Jessop, London 1953, Vol. V, pp. 82-83, 125.

> ...his spirit drank
> The spectacle: sensation, soul, and form,
> All melted into him;...
> ...in them did he live,
> And by them did he live; they were his life.[1]

How was this belief possible to a man interested in science? The question has been answered at length by Professor Piper, but we will give a brief indication here of the way in which Wordsworth reconciled scientific knowledge with religious belief. As has been mentioned, Wordsworth was interested in contemporary questions in science. His friendship, for example, with Sir Humphrey Davy is well-known, and his contact with French thinkers has been demonstrated.

However, it is unnecessary to move outside scientific thought in England to sketch the rational context of Wordsworth's belief that the whole universe ranging from inorganic nature to the mind of man was penetrated by an active principle. We know that he was interested in Erasmus Darwin's Zoonomia, because he was anxious to borrow a copy of it in late February or early March, 1798. In Zoonomia, Darwin gives his views on matter and spirit. These were mentioned earlier in the section on vitalism, but I would like to recall one important fact. Though Darwin believed that matter was pervaded with spirit, he was uncertain about the way in which

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1. The Excursion, Book I, ll. 206-10, The Poetical Works of William Wordsworth, Oxford 1949, Vol. V, p. 15.

the spirit operated in matter. The "supposed ethereal fluids" of magnetism, electricity, heat and light were still mysterious and knowledge about them slight. It was in this atmosphere of speculation that the notion of a spirit activating all matter could flourish and be utilized by a visionary such as Wordsworth as an explanation, according with science, of the feeling induced in him by nature. Because the force which animated the particles of matter was such a vague concept, it could be readily ascribed to a divine source. Thus, Wordsworth was able, under the influence of Coleridge, to rework Hartley's mechanistic but also physiologically-based psychology to his own vitalistic ends:

> The common doctrine concerning the powers of the nervous system supposes the fluid secreted by, and circulating through, the medullary substance, to be of a very active nature.... Now that some powers of attraction or repulsion, or rather of both at different distances, reside in the small particles of the medullary substance, can scarce be doubted after so many instances and evidences as Sir Isaac Newton has produced, of attractive and repulsive powers in the small particles of various bodies...meaning, as he does, by attraction and repulsion, a mere mathematical tendency to approach and recede, be the cause what it will, impulse, pressure, an unknown one, or no physical cause at all, but the immediate agency of the deity.[1]

This, taken in conjunction with a passage in Zoonomia, throws further light on Wordsworth's ideas of the nature of thought:

> Another method of discovering that our ideas are animal motions of the organs of sense, is from considering the great

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1. Observations on Man: His Frame, His Duty, and His Expectations, London 1801, Vol. I, pp. 19-20.

> analogy they bear to the motions of the larger muscles of the body...they are originally excited into action by the irritation of external objects like our muscles; are associated together like our muscular motions; act in similar time with them; are fatigued by continuous exertion like them...[1]

As he explains elsewhere, Darwin's idea of thought, like Hartley's, reduces eventually to motion inherent in the particles of the organs of sense and the brain, but he differs from Hartley in equating an idea with a "sensual motion," and places greater emphasis on the animal nature of thought than Hartley. The passage above is interesting in connection with "Tintern Abbey," composed July 13, 1798, a few months after Wordsworth was presumably reading Zoonomia. The forms of nature recur to the poet during his absence from them and he describes the sensations caused by these images as

> ...sensations sweet,
> Felt in the blood, and felt along the heart;
> And passing even into my purer mind,
> With tranquil restoration.[2]

Here, Wordsworth is presenting man's feeling experience, but behind this are physiological concepts expressed in terms which make them more immediately assimilable to man's feeling life than is the case today. "Felt in the blood, and felt along the heart" may be true of the feelings evoked by the images, but these sensations can be readily referred to Darwin's "sensual motions." Darwin gives the

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1. Op. cit., Vol. I, p. 28.

2. Op. cit., Vol. II, Oxford 1944, p. 260, ll. 27-30.

name "ideas" to the end result of this process, but he means by it nothing more than the images Wordsworth is discussing above:

> The word idea...is here used simply for those notions of external things, which our organs of sense bring us acquainted with originally; and is defined as a contraction or motion, or configuration, of the fibres, which constitute the immediate organ of sense....Synonymous with the word idea, we shall sometimes use the words sensual motion in contradistinction to muscular motion.[1]

According to Darwin, this imaging faculty issues merely in either pleasure or pain, but besides this, Wordsworth links it to a higher intellectual faculty. The sensations pass into his "purer mind." Reference to the Prelude makes this clearer. Although nature was valued at first for the "glad animal movements" and "coarser pleasures" of boyhood amusement that she afforded, nevertheless, by this means, the poet, in childhood, was led to love the "forms sublime or fair" of the natural world. But above this, he tells us,

> ...other pleasures have been mine, and joys
> Of subtler origin... I have felt,
> Not seldom even in that tempestuous time,
> Those hallowed and pure motions of the sense
> Which seem, in their simplicity, to own
> An intellectual charm....[2]

It is unnecessary to pursue the point further to show that Wordsworth is not only attempting to recreate sensation, but to

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1. Op. cit., Vol. I, p. 11.

2. The Prelude, ed. E. de Selincourt, Oxford 1950, p. 33, ll. 548-53. My italics.

blend the accepted rationalisations of these feelings, that were current in his day, into a new synthesis of his own. This is what we would expect of the poet that Coleridge was putting forward as having the only mind fit to undertake a long philosophical poem which would cover every area of man's feeling and intellect. Wordsworth's own view of the nature of his poetic contribution to knowledge can be inferred from the preface to the second edition of the Lyrical Ballads:

> The Man of science seeks truth as a remote and unknown benefactor; he cherishes and loves it in his solitude: the Poet, singing a song in which all human beings join with him, rejoices in the presence of truth as our visible friend and hourly companion. Poetry is the breath and finer spirit of all knowledge; it is the impassioned expression which is in the countenance of all Science.[1]

The poet is the mediator of scientific thought. He is the re-creator, in terms of human experience, of the otherwise remote discoveries of science. The source of Wordsworth's confidence in his vision was in the validity as speculative science of the basic features of the system he had evolved. The mind of man formed a closed circuit with nature and the source of the vitality of both was God.

But it must be reiterated here that neither in method nor in totality were Wordsworth's ideas of natural form primarily

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1. The Poetical Works of William Wordsworth, Vol. II, p. 396.

scientific. The treatment is a poet's treatment, though we must be aware of the scientific and metaphysical implications behind it if we are fully to understand the thought and appreciate its originality.

With this in mind, and the question of the Wordsworthian idea of the life in natural forms somewhat clarified, we will attempt a further elucidation of Wordsworth's thought on the significance of form. It was said before that, because of the speculative nature of scientific thought, it was comparatively easy in Wordsworth's time to reconcile this with other areas of thought such as metaphysics and religion. It is not inconsistent, then, to claim a large element of Platonism in Wordsworth's thought about natural form. As was said before, to discuss sources exhaustively would involve an unwarranted digression, but the work of some Wordsworth scholars may be referred to briefly. In his study of Wordsworth's philosophical background, Melvin Reder[1] distinguishes two main periods in Wordsworth's thought. The poetry of his early period shows Wordsworth under the sway of, chiefly, the Locke-Hartley Associationist tradition, and of Berkeley, with the panentheism of Spinoza providing a bridge to the later "immanent theism" and the influence of Kant and Plato, from 1803 onwards. Arthur Beatty[2]

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1. Wordsworth: a Philosophical Approach, Oxford 1967.

2. William Wordsworth: His Doctrine and Art in Their Historical Relations, Madison 1960.

has advanced "The School of Taste" and Hartley as sources, while Newton Stallknecht,[1] has shown influence of Jakob Boehme and the Coleridgean influence. It will be sufficient for the present discussion if we think of Wordsworth's ideas of form as a blend of panentheism, idealism and Associationism.

The first implies that Wordsworth does not think, like a simple pantheist that God is everywhere and in everything throughout nature. It means rather that he thinks of God as presiding over the natural world mediately. A letter written in 1814 confirms this view:

> Whence does she [Miss Patty Smith] gather that the author of the Excursion looks upon Nature & God as the same? He does not indeed consider the Supreme Being as bearing the same relation to the Universe as a Watchmaker bears to a watch....[2]

Wordsworth's God is neither as remote as Paley's or as intimately bound up with matter as the pantheist's. When Wordsworth looks at a mountain or at daffodils by the edge of a lake, he is not seeing God, but absorbing ideas which reveal to him the great system of nature over which God presides. While natural objects may, through their forms, suggest to us the "forms of things unknown," it is not so much through the details of their physical shape alone, as is

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1. Strange Seas of Thought: Studies in William Wordsworth's Philosophy of Man and Nature, Bloomington 1958.

2. The Correspondence of Henry Crabb Robinson with the Wordsworth Circle, ed. E. J. Morley, Oxford 1927, Vol. I, p. 79.

more the case with Ruskin later, that they are able to do so. Their figure suggests the Platonic idea of the reality behind them. This is why Wordsworth can be classed as an idealist. Moreover, it is the emotional experience of association as much as the appearance of things that impresses the beholder of natural phenomena.

To take Wordsworth's idealism next in order, it is his belief that

> By influence habitual to the mind
> The mountain's outline and its steady form
> Gives a pure grandeur, and its presence shapes
> The measure and the prospect of the soul
> To majesty; such virtue have the forms
> Perennial of the ancient hills....[1]

That is, our emotional perception of the mountain's form as majestic, gives us the idea of majesty. To put it in another way, feelings of majesty arise within our soul as we contemplate the mountain. It is in this way that we come to a vision of ultimate reality or the nature of God, rather than by Paley's method. The experience is aesthetic and emotional and not due to the dry operation of mechanical reason. Why the soul reacts at all in the presence of the mountain is explained by its vitality responding to the vital force in nature. This capacity is inherent in us, though in some of us it operates only feebly. For Peter Bell a primrose is a primrose and nothing more. Though the sensuous nature of thought was important

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1. The Prelude, Book VII, ll. 721-26, op. cit., p. 258.

to Wordsworth, he would have been in agreement with Berkeley as to the secondary importance of the material aspect of nature.

It was stated above that it was by influence "habitual to the mind" that ultimate reality was revealed to the soul. This is where Associationist psychology comes in. The doctrine of Associationism current in Wordsworth's day was taken up by, notably, Archibald Alison, as the basis for a theory of beauty. This will be explored more fully in a later chapter on Psychological Approaches to Form. But for the present a brief quotation will give an insight into Wordsworth's thought regarding the influence of associations in the growth and development of the mind:

> When any object, either of sublimity or beauty, is presented to the mind, I believe every man is conscious of a train of thought being immediately awakened in his imagination, analogous to the character or expression of the original object. The simple perception of the object, we frequently find, is insufficient to excite these emotions, unless it is accompanied with this operation of the mind, — unless, according to common expression, our imagination is seized, and our fancy busied in the pursuit of all those trains of thought which are allied to this character or expression.[1]

Like Alison, Wordsworth believes that it is through the operation of the imagination that we respond to natural objects, and like Alison, he believes that constant exposure to the appropriate natural environment produces, cumulatively, the desired intensification of response. Unlike Alison, he does not see the need

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1. Essays on the Nature and Principles of Taste, reprint of 5th ed., London n.d., p. 69. (First published 1790.)

for constant exposure to the arts as well.

From the foregoing we should now have a clear understanding of Wordsworth's use of science. He takes suggestions from a variety of sources, making his pronouncements on natural form consonant with contemporary scientific beliefs, but he never borrows an element without modifying it to fit his own view. Form in nature is for Wordsworth primarily the Platonic foundation of reality, and the perception of form is a religious and aesthetic experience. Moreover, despite allegations of "prosiness," and attempts later in the century to claim for him the distinction of philosopher, he does not systematically philosophise concerning the significance of natural form. Writing at a time when belief in benevolent creation was not seriously questioned, nor philosophy fractured by specialisation, he was able to present a view of the significance of natural form in which religious, metaphysical, aesthetic and scientific elements blended harmoniously.

It is impossible to treat in detail the work of all the Romantic poets, but it must be stated that their views and methods were fundamentally allied to those described above. Coleridge, like Wordsworth, was a believer in the active universe and in the revelatory role of natural form, but he had, like Wordsworth, his own distinctive symbolism through which he expressed his beliefs. Like Wordsworth, too, he modified his early views in later life. However, I will confine myself to his earlier views, since these seem to be of

greater historical interest, as epitomising his originality, than his later position. In the above discussion of Wordsworth's thought one very significant omission is noticeable. No reference is made to the theory of the imagination which is generally considered to be the outstanding contribution of the Romantics to nineteenth-century thought. Nor will an examination of it be offered at this point. It seems preferable to postpone this until a later chapter on Form and the Creative Process.

But here, I will briefly indicate the role of the imagination in the perception of natural form. To the Romantics — or to Coleridge, as the concept seems to be largely his creation — the faculty of imagination and that of perception are basically the same. Both are creative processes, and both are dimly analogous to the creative faculty of the divine mind behind the universe. It is thus that the perception of form in nature takes on its religious function, and that natural form is able to signify to the perceiver the types of eternal reality. The world of natural phenomena — the world of appearances — reveals the only truth we can know in our present state.

For his system of the universe and the operation of the imagination within it, Coleridge's sources were many. They included Cudworth, Berkeley, Plato, Spinoza, Boehme, Kant, Fichte and Schelling, and others. Studies of his sources are almost as numerous, and there is little agreement among scholars concerning the relative

status of the above as contributors to Coleridge's thought. Orsini[1] warns against confusing distinct sources, such as the German Idealists, under the blanket term Platonic, while McFarland,[2] taking the opposite view, insists that the many distinct philosophical sources usually attributed to Coleridge can be reduced under this term. Stallknecht[3] emphasises the importance of Jakob Boehme, and Appleyard[4] outlines chronologically the successive influences that Coleridge underwent. It is necessary here, however, merely to note that the Romantic view of the imagination was built as much on philosophical sources such as those suggested above, as on the materialistic science that Professor Piper has put forward as a source.

The theory of the imagination was the main legacy of Coleridge and Wordsworth to the second generation Romantics, Keats and Shelley. Since Keats perhaps valued nature rather more as a starting-point for art than as in itself a revelation of the eternal world, it will be more appropriate to take up the question of his ideas on the significance of form in the chapter on Form and Beauty. However, mention must be made of a new element that he and

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1. Coleridge and Idealism, G. N. G. Orsini, Carbondale, 1969.
2. Coleridge and the Pantheist Tradition, Oxford 1969.
3. Op. cit.
4. Coleridge's Philosophy of Literature: the Development of a Concept of Poetry 1791-1819, Cambridge, Massachusetts 1965.

Shelley contributed to the Romantic world-view. In Wordsworth's and Coleridge's formative years, the idea of evolution was still an unpopular foreign theory which Wordsworth could pass over with a negligent "what matters it," and Coleridge could vigorously reject as illogical and empirically groundless. But the work of Keats and Shelley began to appear in the second decade of the century, when uniformitarianism was beginning to make its influence felt, and when evolutionism first began to stir again in England, after the rejection of Erasmus Darwin's theory earlier. It is not surprising, therefore, to find in the work of both poets the notion that the world is progressing toward eventual perfection. In this sense they were evolutionary thinkers.

As Professor Piper notes, Keats probably derived his view of evolution in Hyperion from W. C. Wells, whose work was mentioned early in this chapter. Keats's progress, like Wells's, is a progress in beauty:

> Each species or kind brings forth a still more beautiful kind which is to supplant it, and even the ancient gods must give way before the more beautiful race to which they have given birth.

For Keats, the theory

> ...promised to show that the importance of beauty was a result of a law of nature, and that the whole development of the universe had beauty as its purpose.[1]

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1. Op. cit., pp.192-94.

Keats's interest in contemporary science was perhaps less, and is certainly less well-attested, than Shelley's. He was primarily an aesthetic thinker, whereas Shelley's interests tended more to science, especially in his early thinking, and metaphysics. Shelley scholars are generally agreed that Shelley's philosophical outlook progresses from one largely materialistic and necessitarian to one essentially Platonic, taken in the broadest sense, to include neo-Platonic. They are also generally agreed that he was primarily an evolutionist. He, of course, inherited from the earlier Romantics the Platonic theory that the forms of nature mirror the eternal world. This and the theme of the progress of the world toward perfection are the two dominant threads of thought which run throughout all his poetry. But he never attempted any rational synthesis of the two ideas, which, as Professor Grabo has noted, remain unreconciled in his poetry.

> God and man grow...by freeing themselves perpetually from their inadequate first thoughts and by the substitution, therefor, of better. Such a philosophy seems not wholly reconcilable with the neo-Platonic belief in the all-perfect One in whom already exists the Divine plan of evolution. Shelley's conception seems to be more experimental, as of an evolution whose goal is not constant nor known but which must endlessly be redefined, as of a limit constantly approached but never reached....The argument is really carried on upon two planes, the plane of reason which suffices for the practical control of forces in a time-space world, and the plane of intuition of which we have momentary glimpses in our more inspired moments.[1]

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1. Carl Grabo, The Magic Plant: the Growth of Shelley's Thought, Chapel Hill, North Carolina 1936, p. 435.

In his study Prometheus Unbound, he adds further:

> Shelley's interest in evolutionary theory is more evident in his description of the stellar universe than of life forms. The growth of solar systems from the primordial nebulous stuff is depicted with an exactness which evidences his knowledge of Laplace and Sir William Herschel. In his account of organic evolution he remarks on prehistoric monsters and on the ancestors of man who were "mortal but not human," a phrase suggesting that he subscribed to the theory of Helvetius that man was descended from a tribe of monkeys which had learned the use of their thumbs; or that he believed in prehistoric races destroyed by some cataclysm of nature.
>
> The growth of stars and the descent of man are, however, in Shelley's philosophy but superficial evidences of an evolutionary theory whose originality lies in this, that it is mental and moral.[1]

This presentation of evolution on two different levels of thought, and the tendency towards an idealist and speculative interpretation of the concept, reflects the state of evolutionary theory in contemporary science. The theory had been stated — for example, by Erasmus Darwin, in whom Shelley was greatly interested — but without the necessary weight of empirical evidence to support it. This tentativeness is reflected in the vagueness of Shelley's vision, the unresolved elements of reason and intuition that Professor Grabo detects in Shelley's poetry, and in Shelley's preference for a theory of mental and moral rather than material progress.

In view of this incomplete assimilation, then, we would expect to find that the idea of evolution would be dealt with as a

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1. Prometheus Unbound: an Interpretation, New York 1968, p. 183.

factor to be fitted into, and thus to amplify, the Romantic world-view, rather than particularly to modify the idea of the significance of natural forms. In fact, an examination of Shelley's poetry reveals that the direct involvement of evolutionary theory of a strictly material kind with the idea of form is slight, and virtually disappears in Shelley's mature work. His view of the significance of natural form is basically the same as that of the earlier Romantics.

To sum up the contribution of Keats and Shelley: it appears that the fundamental belief held by Coleridge and Wordsworth that the forms of the natural world furnish us with the types of eternal reality underwent no basic change when the later Romantics attempted to adapt their world-view to conform with the trends of contemporary scientific thought. The new interest in evolution appeared to offer the additional hope of eventual material perfection, but, because evolution was still very speculative as science, its counterpart in poetry was given largely idealist treatment and was only loosely admixed with other elements of the existing Romantic world-view. In this way, the older structure of belief was sustained.

Even though the unproved evolutionary hypothesis of their day could not provide a basis for a more truly comprehensive treatment of natural form, the later Romantics were in one respect more advanced in their thought than Ruskin, writing a couple of decades

later. The Christian God of Paleyism, remotely controlling his creation, had entirely disappeared from the thought of Keats and Shelley. But with Ruskin we have the abandonment of the complex thought underlying the Romantics' active universe in favour of a return to a simple commonsense view of God's relation to the natural world, which is fundamentally not unlike that of Paley's Natural Theology and the Bridgewater Treatises, if we add a discussion of the function of beauty.

Ruskin began writing at a time when Scriptural geology and the vogue for the argument from design was at its height. One of his teachers at Oxford had been Buckland, a contributor to the Bridgewater Treatises. It was Buckland's influence that turned Ruskin's thought towards the new interpretation of the argument from design which was then competing with Paleyism. During the years in which Ruskin was at work on Modern Painters, in which he gives his fullest treatment of the significance of natural form, the Vestiges debate was in full swing. Earlier, he had met and conversed at length with Charles Darwin, whose evolutionary views he was to reject steadily for the rest of his life. It is not surprising then, that, ardent conservative geologist and botanist and Christian as he was, Ruskin chose to renew the older tradition. In addition to these influences, it must be remembered that Ruskin's ideas on natural form took shape at a time when the interest in classification evidenced by the "parade of systems," in morphology

and comparative anatomy, and in the recreational activities of botanizing and collecting geological specimens was at its peak — that is to say, at a time when, both at the learned and popular levels, interest in the detailed description of natural form was especially strong. All these factors find expression in Ruskin's work.

In considering Ruskin's career as a writer on aesthetics, two factors are of particular interest to us. The first is his attempts at a more scientific approach to the problem of natural form; the second is his transition from the landscape to man as the link with God. Concerning the first, it was natural that Ruskin should show a strong interest in descriptive analysis of natural objects at a time when collecting and classifying of botanical and geological specimens was a popular pursuit. It was natural, too, that when he came to devise his theory of what constituted the truth of form — what was worthy to be represented in art — he should try to reconcile his empirical bent with the idealism of classical tradition. In the morphology and comparative anatomy of the time the question most energetically debated was that of the criteria of form. What formal factors distinguished one species from another? How was the type of each species to be decided? These questions are reflected in Ruskin's semi-empirical approach to the problem of the ideal of the species. It was important to Ruskin to decide what constituted the true type, for it was through

this ideal form that the attributes of the divine creator were to be revealed. His observations of nature suggested to him, on the one hand, an empirical approach. On the other, he was aware of the classical idealist tradition of Reynolds. In attempting a reconciliation between the two he resorted to his knowledge of Locke, and tried to effect a merger by a confusion of Locke's use of the term "form" with the Platonic idea of form. Henry Ladd has shown this in his discussion of Ruskin's idea of "the right sort of truth" to be represented in art:

> Locke's theory of primary qualities seemed to him to supply a reasonable explanation of the mystery of permanence or true identity in the shifting and accidental appearance of things. Without the background of Locke's metaphysic and certainly with no Platonic theory of "ideas," Ruskin forced the term "form" to refer to the artistic facts which he observed empirically and to the characteristic ideality which he superimposed upon appearance. Form became the rational bridge between the concrete and the abstract.[1]

This is an interesting revelation of how the growing preoccupation with the empirical approach to natural form in science was already beginning to show signs of infiltrating the aesthetics of form. Later in the century this trend was to be emphasised by the work of the evolutionary aestheticians such as Grant Allen and Vernon Lee, though in a much more radical way.

In the expression of his theory of the perception of form, too, Ruskin is more overtly scientific than Wordsworth. In Wordsworth,

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1. The Victorian Morality of Art, New York 1968, pp. 66-67.

the perception of natural form is primarily a sensuous experience passing into an intellectual one. It is at once aesthetic and religious. With Ruskin, the sensuous side of the religious insight is played down. According to him, there are two distinct faculties involved in our perception of the beauty of nature. The first, and lower is "aesthesis," which

> properly signifies mere sensual perception of the outward qualities and necessary effects of bodies....But I wholly deny that the impressions of beauty are in any way sensual; they are neither sensual nor intellectual, but moral....[1]

The moral impressions of beauty are received by the "theoretic" faculty. Ruskin, as R. G. Collingwood has shown, was no philosopher.[2] Neither was he particularly interested in psychology. Psychological aesthetics was in its infancy. But he was following the contemporary bent in science towards compartmentalising and classification, in attempting to offer a deeper analysis of the relationships between the departments of religious and aesthetic experience. These had been confused in Wordsworth, who was still following the dictates of eighteenth-century ideas of taste, as exemplified especially in the work of Francis Hutcheson, in whose essay, An Inquiry into the Original of our Ideas of Beauty and Virtue: in Two Treatises,[3] the

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1. Modern Painters II, The Works of John Ruskin, eds. E. T. Cook and Alexander Wedderburn, London 1903, Vol. IV, p. 42.

2. Ruskin's Philosophy, Kendal, 1922.

3. London 1729.

aesthetic and moral faculties are referred to a common source.

From the consideration of Ruskin's "theoria" we can pass to the next point of interest in his idea of the significance of natural form -- his transition from a belief in the revelatory power of nature to the more humanistic position of his later years. In his early work, Ruskin saw the beautiful forms of the natural world as exemplifying the attributes of the divine creator. As was mentioned above, these opinions were formed under the influence of the conservative geologist Buckland, and his co-promulgators of the design doctrine. In Modern Painters I, we find this simple explanation of how the beauty of natural form functions:

> Any material object which can give us pleasure in the simple contemplation of its outward qualities without any direct and definite exertion of the intellect, I call in some way, or in some degree, beautiful. Why we receive pleasure from some forms and colours, and not from others, is no more to be asked or answered than why we like sugar and dislike wormwood. The utmost subtlety of investigation will only lead us to ultimate instincts and principles of human nature, for which no farther reason can be given than the simple will of the Deity that we should be so created.[1]

Later in the same volume, Ruskin states that even colour is feeble, compared with form, in its impact on our perceptive faculties. It is to the forms of nature especially that we owe our insights of its creator. However, he distinguishes between two types of beauty. The first, Typical Beauty, applies especially to form. It consists

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1. Works, Vol. III, p. 109.

in

> ...that external quality of bodies...which, whether it occur in a stone, flower, beast, or in man, is absolutely identical, which, as I have already asserted, may be shown to be in some sort typical of the Divine attributes, and which therefore I shall, for distinction's sake, call Typical Beauty....[1]

The second sort of beauty, Vital Beauty, is of little interest in the present discussion, except to note that it does not imply a vitalism which would have been out-of-date at this time. Typical Beauty can occasionally be a hindrance to our absorbing the proper moral lessons from the actions and habits of the various animals that God intended. For example, "...the most fierce and cruel creatures are often clothed in the liveliest colours, and strengthened by the noblest forms...."[2] but generally speaking the moral beauty of the animal creation is correlated to their bodily beauty. Taking the beauty of the eye as an example, Ruskin works his way up from the bottom to the top of the ladder of nature to show that, as this organ is increasingly animated with the divine virtues of intelligence and gentleness, the higher we rise in the animal kingdom, so it grows increasingly beautiful to our perception.

This naive faith in the revelatory power of the beauty of nature gave way in later years to a vision which comprehended also

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1. Ibid., Vol. IV, p. 64.
2. Ibid., p. 157.

the elements of pain and menace in nature. The writing of Modern Painters extended over nearly two decades. Volume I appeared in 1843, Volume II in 1846, after the Vestiges upheaval, Volumes III and IV in 1856, and Volume V in 1860. In the first two volumes we find Ruskin's strongest expression of confidence in the benevolent design; after this, his vision darkens, as John Rosenberg has remarked:

> During the decade separating the second volume (1846) from the third (1856), Ruskin became less moved by the beauty of art and nature than by the waste, mystery, and terror of life. The tone of the first two volumes is pious and lyrical; that of the later volumes is humanistic and tragic.[1]

In the last volume of 1860, Rosenberg claims, we "suddenly stumble on Darwin's Nature." It was probably not due to either Vestiges or the Origin that Ruskin's vision changed, but to the collective pressure of discoveries in empirical science, especially geology, that challenged the design argument. F. G. Townsend dates Ruskin's loss of landscape feeling at 1849 and his changed idea of God between 1851-53, and quotes the famous passage from the letter to Henry Acland in support of this.

> You speak of the Flimsiness of your own faith. Mine, which was never strong, is being beaten into mere gold leaf, and flutters in weak rags from the letter of its old forms.... If only the Geologists would let me alone, I could do very well, but those dreadful Hammers! I hear the clink of them

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1. The Darkening Glass: a Portrait of John Ruskin's Genius, New York 1961, p. 22.

at the end of every cadence of the Bible verses....[1]

It seems reasonable to claim, then, that Ruskin's Modern Painters foreshadows the transition that was to take place in thought about natural form. Begun when Scriptural geology and the argument from design were strongest, carried on over the years that saw the publication of Vestiges, and finished as the Origin was emerging, it shows the marks of both world-views. It has affinities with the newly-emergent approach in science, in its disregard of metaphysics, its avoidance of vitalism, and in its preoccupation with formal criteria and descriptive analysis of form.

After Ruskin, metaphysical aesthetics of natural form dwindled into the diffident materialistic moralisings of Pater on the significance of nature. But scientific aesthetics blossomed in the evolutionary theories of the function of form put forward by Vernon Lee, Grant Allen and others. Minor writers, no doubt under the spell of Ruskin, still carried on the outworn tradition of the design theory, but the major thinkers in the field turned elsewhere for inspiration. One of the last considerable expressions of the design theory came from J. B. Mozley, in his sermon "Nature." Form, to Mozley, was the basis of perception, and

...the universe or cosmos is the expression of the Divine

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1. Ruskin and the Landscape Feeling: a Critical Analysis of His Thought During the Crucial Years of His Life 1843-1856, (Illinois Studies in Language and Literature, Vol. XXXV,) Urbana 1951, p. 60.

> Idea, as it were, in objective shape, the World of external nature, so to speak the visible act of God, the Author, Maker and Creator.[1]

But generally, the design argument provided no stimulus to serious aesthetic enquiry for the remainder of the century. The work of Pater provides the clearest illustration of the changed attitude to natural form after the Darwinian revolution and the defeat of vitalism. Pater had the fashionable dislike of metaphysics and a strong appreciation of the significance of the findings of the empirical sciences.

> Modern thought is distinguished from ancient by its cultivation of the "relative" spirit in place of the "absolute." Ancient philosophy sought to arrest every object in an eternal outline, to fix thought in a necessary formula, and the varieties of life in a classification by "kinds," or genera. To the modern spirit nothing is, or can be rightly known, except relatively and under conditions. The philosophical conception of the relative has been developed in modern times through the influence of the sciences of observation.[2]

These are the factors which are to decide the approach to aesthetic problems. The observations of the individual are of paramount importance in deciding what is beautiful, and the enquiry is limited to the illumination of concepts founded in experience. The nature and significance of the abstraction beauty are irrelevant.

> ...one must realise such primary data for oneself, or not at

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1. Sermons Preached Before the University of Oxford and on Various Occasions, London 1877, p. 51.

2. Appreciations, with an Essay on Style, London 1890, p. 65. First published 1889.

> all. And he who experiences these impressions strongly, and drives directly at the discrimination and analysis of them, has no need to trouble himself with the abstract question what beauty is in itself, or what its exact relation to truth or experience — metaphysical questions, as unprofitable as metaphysical questions elsewhere. He may pass them all by as being, answerable or not, of no interest to him.[1]

In the Renaissance, the pressures of material science, its revelation of flux and relativity, its proclamation of the unknowability of first causes, are seen as forcing the individual into a cult of subjectivism.

> Let us begin with that which is without — our physical life, Fix upon it in one of its more exquisite intervals, the moment, for instance, of delicious recoil from the flood of water in summer heat. What is the whole physical life in that moment but a combination of natural elements to which science gives their names?....Our physical life is a perpetual motion of them — ....Or if we begin with the inward world of thought and feeling, the whirlpool is still more rapid.... At first sight experience seems to bury us under a flood of external objects....And if we continue to dwell in thought on this world,...the whole scope of observation is dwarfed to the narrow chamber of the individual mind. Experience, already reduced to a swarm of impressions, is ringed round for each one of us by that thick wall of personality....Every one of those impressions is the impression of the individual in his isolation....[2]

This implies an intensity of sensuous response — of observation and feeling.

> Not the fruit of experience, but experience itself, is the end. A counted number of pulses only is given to us of a

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1. The Renaissance; Studies in Art and Poetry, London 1901, pp. viii-ix. (First ed. 1869.)

2. Ibid., pp. 233-35.

> variegated, dramatic life. How may we see in them all that is to be seen in them by the finest senses? How shall we pass most swiftly from point to point, and be present always at the focus where the greatest number of vital forces unite in their purest energy?
>
> To burn always with this hard, gemlike flame, to maintain this ecstasy, is success in life.[1]

In Pater's early view, the sensations of the individual are the only reality worth attending to, and, consequently, the objects of the natural world are prized for the purely aesthetic enjoyment they afford.

But this is not to suggest that Pater bases his system of life on the simple response of the individual to natural objects. These are now to be viewed through the perspectives afforded by modern science. It is in the tracing of relationship that we begin to achieve the insights and to form habits of thought that will -- hopefully -- help us to fabricate a new world-view. How this sort of observation operates may be inferred from Pater's remarks on a sea-shell in Plato and Platonism.

> Think, for a moment, of the difference, as regards mental attitude, between the naturalist who deals with things through ideas, and the layman (so to call him) in picking up a shell on the sea-shore; what it is that the subsumption of the individual into the species, its subsequent alliance to and co-ordination with other species, really does for the furnishing of the mind of the former. The layman, though we need not suppose him inattentive, or unapt to retain impressions, is in fact still but a child; and the shell, its colours and convolution, no more than a dainty, very easily destructible toy to him. Let him become a schoolboy about it,

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1. Ibid., p. 236.

> so to speak. The toy he puts aside; his mind is drilled perforce, to learn about it; and thereby is exercised, he may think, with everything except just the thing itself, as he cares for it; with other shells, with some general laws of life, and for a while it might seem that, turning away his eyes from the "vanity" of the particular, he has been made to sacrifice the concrete, the real and living product of nature, to a mere dry and abstract product of the mind. But when he comes out of school, and on the sea-shore again finds a fellow to his toy, perhaps a finer specimen of it, he may see what the service of that converse with the general has really been towards the concrete, towards what he sees — in regard to the particular thing he actually sees. By its juxtaposition and co-ordination with what is ever more and more not it, by the contrast of its very imperfection, at this point or that, with its own proper and perfect type, this concrete and particular thing has, in fact, been enriched by the whole colour and expression of the whole circumjacent world, concentrated upon, or as it were at focus in, it. By a kind of short-hand now, and as if in a single moment of vision, all that, which only a long experience, moving patiently from part to part, could exhaust, its manifold alliance with the entire world of nature, is legible upon it, as it lies there in one's hand.
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> So it is with the shell, the gem, with a glance of the eye; so it may be with the moral act, with a condition of the mind, or a feeling.[1]

The policies and revelations of modern science and the insights afforded by works of art such as the Mona Lisa form the foundation of Pater's view. It is probably an insoluble question, how far he was au fait with the findings of contemporary science. An article in the Times Literary Supplement suggests that Pater's acquaintance with the newest scientific facts may have been more extensive than is generally supposed. The famous Gioconda passage is quoted in support of this:

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1. Op. cit., London 1910, pp. 157-59. (First ed. 1893.)

> In this early period Pater sees himself as attempting to combine vulgarization of the most "modern" scientific ideas with eclectic generelizations from certain ideas about the "spiritual" and the "physical" nature of man and the laws of history.
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> Much has been written, and intelligently, on, for example, the Monna Lisa passage of 1869. But we cannot find that anyone has noted that "the flesh, the deposit in the cell of strange thoughts and fantastic reveries" is not indulgent metaphor and could not have been written without recent investigations into the structure of the human body....it might be advisable, for example, for scholars of Pater to consult before going any farther a standard handbook like Charles Singer's A History of Biology, which has this striking quotation from Virchow's Cellular Pathologie of 1858: "Where a cell arises, there a cell must have been before, even as an animal can come from nothing but an animal, a plant from nothing but a plant. Thus in the whole series of living things there rules an eternal law of continuous development."[1]

It may be that Pater was well up with the newest continental theories. But there is a source much closer home that the writer has overlooked. "Notes on Leonardo da Vinci," which contained the Gioconda passage appeared in the Fortnightly Review, Volume VI, New Series, July-December 1869. In the same periodical, Volume III, New Series, in the April 1868 issue, appeared the first of a series of articles by G. H. Lewes entitled "Mr Darwin's Hypotheses." These supply all the material Pater would have needed for the scientific background to the passage in question.

Unfortunately, the internal evidence in Pater's writings is too slight to admit of our forming any opinions as to the depth and extent of his scientific knowledge. In the passage from the

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1. "The Art of the High Wire. Pater in Letters," TLS 26 Feb., 1971, No. 3,600, p. 229.

Renaissance quoted above, he refers to "vital forces," at a time when this term had been discredited by scientists. However, Huxley was still championing vitalism in his article on "The Physical Basis of Life" which appeared in the Fortnightly Review in February 1869. Actually Huxley's attitude is ambivalent. While declaring that there is no such thing as "vitality" and insisting that, in the discussion of life-phenomena, materialistic terms are to be used, he is determined that a materialistic philosophy, which this seems to imply, be avoided.

> ...the man of science, who, forgetting the limits of philosophical enquiry, slides from these formulae and symbols into what is commonly understood by materialism, seems to me to place himself on a level with the mathematician, who should mistake the x's and y's with which he works his problems, for real entities....[1]

Obviously, there is no direct connection between Huxley's article and the Renaissance. The quotation is given as providing the contemporary intellectual position regarding the term which Pater uses so lightly. It is impossible to tell from the conclusion to the Renaissance whether he means literally the old-fashioned notion of "vital forces" or whether this is a mere figure of speech used as a variation on the "experience" he has been discussing a couple of sentences previously. All of which considerationswould tend to suggest that, whatever the depth of Pater's scientific knowledge,

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1. Vol. V, New Series, Feb. 1869, p. 145.

his use of it is not always according to strict empiricism.

Anthony Ward is of interest in this connection. He directs attention to the fact that the growing popularity of Hegel after 1865 helped re-interpret Darwinian evolution.

> The Hegelian description of evolution was represented as maintaining that the process of change was neither random nor mechanical but was the means by which the world-spirit, Geist, was ever more fully revealing itself. Further, change for Hegel, the contemporary interpreters said, 'flux,' was not only necessary for the release of spirit, the evolutionary process was itself part of the spirit. The description of change that Hegel gave, therefore, was doubly comforting to the Victorian. It at once posited an end towards which the process was tending and at the same time insisted that the present carried an important weight of meaning. Hegel's thought effected a reconciliation between the idea of the 'flux' and the longing for security, for though the moment was fleeting it carried in it 'the accumulative capital of the whole experience of humanity' (to use Pater's phrase.)

In Ward's view, Pater aspired to the sort of security described above — his "attention to nature is always informed by these transcendental aspirations"[1] — but never attained it. The justice of this view becomes further apparent as we proceed to a consideration of the second element in Pater's system.

Just as it was the findings of natural science rather than natural form itself that Pater turned to, so it was the beauty of art rather than of nature that he put forward as the significant experience of humanity. This will be dealt with more fully elsewhere, but its effects on the reaction to natural beauty will be

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1. Walter Pater: the Idea in Nature, Worcester 1966, p. 46, pp. 76-77.

mentioned here. Compared with Pater, Wordsworth had a considerable mistrust of the effect of art on human nature. The education afforded by contact with the beauty of natural forms was as sufficient for the adult as for the child, in Wordsworth's view. But natural beauty, for Pater, is operative mainly in childhood. This is apparent from a study of "The Child in the House." Florian Deleal looks back on his childhood experiences in the house he grew up in:

> ...inward and outward being woven through and through each other into one inextricable texture — half, tint and trace and accident of homely colour and form, from the wood and the bricks; half, mere soul-stuff, floated thither from who knows how far.[1]

The child finds pleasure in things that hardly appear beautiful to adult eyes:

> For it is false to suppose that a child's sense of beauty is dependent on any choiceness or special fineness, in the objects which present themselves to it, though this indeed comes to be the rule with most of us in later life....

It is in early childhood that natural beauty thus affects the child most strongly, for instance, "in the gold of the dandelions at the road-side...in the lack of better ministries to its desire of beauty." With Pater, the forms of nature are no longer significant of eternal reality, — the supernatural appears merely as a fear of "revenants" — they are merely to be enjoyed for their beauty.

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1. Miscellaneous Studies: a Series of Essays, London 1895, pp. 172-73.

Colour is as important as form, or perhaps of even greater importance. It is for the associations they fix in our memory — for their"brain building" power — that early experiences of beauty are to be valued. This implies only the enrichment of experience.

> How insignificant, at the moment, seem the influences of the sensible things which are tossed and fall and lie about us, so, or so, in the environment of early childhood. How indelibly, as we afterwards discover, they affect us; with what capricious attractions and associations they figure themselves on the white paper, the smooth wax, of our ingenuous souls, as "with lead in the rock forever," giving form and feature, and as it were assigned house-room in our memory, to early experiences of feeling and thought, which abide with us ever afterwards, thus, and not otherwise.[1]

But the child's world, for Pater, unlike Wordsworth's is built on the impressions of civilization, rather than nature. As he grows older, the products of art become increasingly important to Florian. He prefers "a kind of comeliness and dignity, an urbanity literally, in the modes of life...." The house and its objects — the old furniture and ornaments — are the source of this, and they provide a sense of security, as well as satisfying in part the desire for beauty. Florian's reaction to the world outside is dualistic. His unnaturally acute awareness of physical beauty, "bright colour and choice form" in nature and art is offset by a morbid preoccupation with suffering. In Wordsworth, fear and beauty of nature were complementary forces working towards the

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1. Loc. cit., pp. 174-75, 176-77.

enlightenment of the individual. By Pater's time, confidence in nature is shaken. The world sometimes appears as impelled by

> ...that great machine in things, constructed so ingeniously to play pain-fugues on the delicate nerve-work of living creatures.[1]

In the closing decades of the century a new awareness of animal suffering emerged. The periodicals of the time abound with articles on the question, most especially on the moral standing of vivisection. It was no doubt this and the "struggle for survival" that contributed to Pater's view of experience expressed in "The Child in the House."

But if confidence in the power of nature to reveal man's situation in the universe is lost, there is a new awareness of the value of science in this connection. The early essay on Coleridge makes Pater's position on this head clear:

> The philosophical conception of the relative has been developed in modern times through the influence of the sciences of observation. Those sciences reveal types of life evanescing into each other by inexpressible refinements of change. Things pass into their opposites by accumulation of undefinable quantities. The growth of those sciences consists in a continual analysis of facts of rough and general observation into groups of facts more precise and minute. The faculty for truth is recognised as a power of distinguishing and fixing delicate and fugitive detail. The moral world is ever in contact with the physical, and the relative spirit has invaded moral philosophy from the ground of the inductive sciences. There it has started a new analysis of the relations of body and mind, good and evil, freedom and necessity. Hard and abstract moralities are yielding to a more exact estimate of the subtlety and complexity of

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1. Ibid., p. 184.

> our life. Always, as an organism increases in perfection, the conditions of its life become more complex. Man is the most complex of the products of nature. Character merges into temperament: the nervous system refines itself into intellect. Man's physical organism is played upon not only by the physical conditions about it, but by remote laws of inheritance, the vibration of long-past acts reaching him in the midst of the new order of things in which he lives. When we have estimated these conditions he is still not yet simple and isolated; for the mind of the race, the character of the age, sway him this way or that through the medium of language and current ideas. It seems as if the most opposite statements about him were alike true: he is so receptive, all the influences of nature and of society ceaselessly playing upon him, so that every hour in his life is unique, changed altogether by a stray word, or glance, or touch. It is the truth of these relations that experience gives us, not the truth of eternal outlines ascertained once for all, but a world of fine gradations and subtly linked conditions, shifting intricately as we ourselves change — and bids us, by a constant clearing of the organs of observation and perfecting of analysis, to make what we can of these. To the intellect, the critical spirit, just these subtleties of effect are more precious than anything else. What is lost in precision of form is gained in intricacy of expression. It is no vague scholastic abstraction that will satisfy the speculative instinct in our modern minds. Who would change the colour or curve of a rose-leaf for that...colourless, formless, intangible, being...Plato put so high? For the true illustration of the speculative temper is not the Hindoo mystic, lost to sense, understanding, individuality, but one such as Goethe, to whom every moment of life brought its contribution of experimental, individual knowledge; by whom no touch of the world of form, colour, and passion was disregarded.[1]

Form is now valued for the sake of fine material distinctions — for the habit of mind that observation of these engenders. These in themselves are indicative of significant truths, without the attempt to relate them to a higher metaphysical truth. Form now takes its significance to humanity from what it can tell us of

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1. Loc. cit., pp. 65-67.

empirical truth, for its connections with the web of physical life and the mental growth of man, and because its beauty brings pleasure.

Pater's understanding of the relationship between the new science and the significance of natural form has in effect, more affinity with the layman's than with the scientist's. But contemporary with Pater there was emerging a more strictly scientific approach to the question. This had its roots in the work of Herbert Spencer, Charles Darwin and Alfred Russel Wallace. The essence of this standpoint was to insist, even more firmly than Pater, on the adequacy of the natural sciences to present a self-sufficient explanation of the problem of the significance of natural form. Form was seen as part of the evolutionary mechanism. Darwin explains how this functions in The Descent of Man.

> Sense of Beauty. — This sense has been declared to be peculiar to man. I refer here only to the pleasure given by certain colours, forms, and sounds, and which may fairly be called a sense of the beautiful; with cultivated men such sensations are, however, intimately associated with complex ideas and trains of thought. When we behold a male bird elaborately displaying his graceful plumes or splendid colours before the female, whilst other birds, not thus decorated, make no such display, it is impossible to doubt that she admires the beauty of her male partner. As women everywhere deck themselves with these plumes, the beauty of such ornaments cannot be disputed....the eye prefers symmetry or figures with some regular recurrence. Patterns of this kind are employed by even the lowest savages as ornaments; and they have been developed through sexual selection for the adornment of some male animals. Whether we can or not give any reason for the pleqsure thus derived from vision..., yet man and many of the lower animals are alike pleased by the same colours, graceful shading and forms, and the same sounds.[1]

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1. Op. cit., London 1875, pp. 92-93.

Here beauty of natural form is given a purely material significance. It is a factor involved in sexual selection and, at the same time, one of the results of this process.[1]

Darwin did not venture any further in aesthetics. This was left to later workers in psychological aesthetics, notably to Vernon Lee, James Sully and Grant Allen, whose work was concerned primarily with form in art, and only secondarily with natural form. Allen dedicates his Physiological Aesthetics to Herbert Spencer, and sees the book as an extension of Spencer's work. In the preface, he claims his line of argument is analogous to Darwin's.

> I have attempted first to show the general relation of pleasure and pain to our organism and its circumstances; after which I have tried to prove that our existing likes and dislikes in aesthetic matters are the necessary result of natural selection.[2]

It is not my purpose here to give a full discussion of the achievement of the evolutionary psychologists who based their theories on those of Darwin and Spencer. This will be reserved to a later chapter. But enough has been said to indicate the direction in which aesthetic theory about the significance of natural form developed in the nineteenth century.

Early in the century, we found that the work of the Romantics, with its radical interest in speculative natural science,

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1. These theories were discussed at some length by Constance Naden in a series of eight articles on "The Evolution of the Sense of Beauty" in Knowledge, 10 April - 22 May, 1885.

2. Op. cit., London 1877, pp. vii - viii.

stood out, in the uniqueness of this interest and in its associated world-view, from the accepted trend of Paleyism. At this time, however, the new science of geology, especially uniformitarianism, and the daring theory of evolution of species had yet to undermine significantly the absolutist world-picture, to which the Romantics still clung. Up to the mid-century, and even beyond, we found a continuing defence of this last by the outstanding conservative scientists of the day, a considerable volume of material being published in support of the design theory — notably the Bridgewater Treatises. From the Romantics to Ruskin, in fact, conservative natural science, which can be identified almost exclusively at this time with the collection, description and classification of data for the support of this dogma, held sway over the field of aesthetic enquiry.[1] In both natural science and aesthetics at the mid-century, interest in the establishment of formal principles was exceptionally strong.

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1. British science, except perhaps geology, early in the century lagged behind continental achievements. Communication between British researchers, who tended to be of the brilliant amateur order, was uncertain, as was access to the latest continental discoveries. Also, the universities were suffering a period of decadence at this time. These factors are the subject of frequent contemporary remark, the best-known perhaps being Charles Babbage's examination of the question. It is not surprising, under these conditions, that, until past the mid-century, with its renaissance of interest in learning generally and with the stimulus provided by Darwinism, British scientific orthodoxy continued to be of the strongly conservative kind.

Nor did the publication of the Origin bring about an instant cessation of interest in these and the traditional aesthetic ideas of natural form. 1856 saw the appearance of the Typical Forms and Special Ends in Creation of James McCosh and George Dickie. According to their view, which epitomises the commonly-accepted theories of the day, the human mind was naturally adapted by divine providence to the perception of types in nature, while it was also obvious that types ran through nature. Similarly, nature was created susceptible of symbolic interpretation, and "the class of aesthetic emotions are meant to lead our minds from creation to the Creator."[1] McCosh and Dickie, in their dual account of phenomena from the scientific and aesthetic viewpoints, illustrate how closely intertwined the two strands of thought were at this time, and how strong a grip the theocentric view of the universe still retained, despite the threat of uniformitarianism and Chambers's Vestiges. It was not until the 'seventies, with the rejection of vitalism and the establishment of Darwinism as scientific orthodoxy, that new aesthetic attitudes to the question of the significance of form appeared. In these the focus of attention had shifted from the sanctions for formal theory to the question of the function of form, and, in the final phase, from nature to art. Although the function of natural form was included in the scope of early evolutionary aesthetic

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1. Op. cit., Edinburgh, pp. 486-87.

theories, with the later evolutionists, such as Vernon Lee, it was almost as an afterthought. Nature no longer loomed above man as the symbol of divine attributes but was merely available for analysis when the more interesting field of art had been exhausted. Throughout the century, then, there had been a close correlation between scientific and aesthetic preoccupations. Early on, the Romantics favoured the less orthodox theories of natural science, but the remainder of the century, with the exception of the rather avant-garde ideas of Herbert Spencer, followed the conservative tradition of science. Even the evolutionary aestheticians did not appear in force until Darwinism was well-established.

We saw that, as the century opened, metaphysics, science and theology harmonized to present the universe as designed by a benevolent creator, and that the Romantic belief in the revelatory power of natural form was in accord with this. But by the middle of the century, the inroads of material science had undermined confidence in metaphysical enquiry and in nature. There was a tendency to turn away from natural form toward humanity for insights into higher reality. In the final phase, nature was almost entirely abandoned except for what she could tell of the material significance of natural form, through the perspective of the natural sciences. This was symptomatic of the new philosophical attitude pervading all departments of thought with the establishment of Darwinism. Natural form was no longer valued for what it could

reveal of man's relation to God, but for what it could suggest of the origin and function of man's aesthetic sense and of the network of relationships that make up his natural, and so, perhaps, his moral environment. Thus, aesthetic ideas of the significance of natural form continued to accord with science to form part of a unified world-view under the new philosophy as they had under the old.

Chapter II

FORM AND THE CREATIVE PROCESS

In Chapter One, we saw that, early in the century, interest in nature was largely of an idealistic kind, but that, as the century progressed, empiricism entered increasingly into thought on nature, until, with the establishment of Darwinism, the natural world came to be viewed almost exclusively through the perspectives afforded by the natural sciences. This pattern of development is discernible, too, in theories of the creative process. As the century opened, writers on aesthetics turned from an ideal view of nature, to nature in its wealth of empirical detail, and to the processes of the natural world for, respectively, the materials of art, and analogues and suggestions for the basis of a theory of form.

From antiquity, of course, nature had always supplied the fundamentals of a theory of artistic form — the theory of imitation. In the eighteenth century, the high-water mark of this approach to the

creative process was represented by the Discourses of Sir Joshua Reynolds, whose influence was felt into the opening decades of the nineteenth century. Reynolds's theory was essentially idealist and was based on a long tradition which reached him principally through the work of Père Buffier and Adam Smith. To Reynolds, the beautiful images of which works of art are composed exist only in the mind of the artist, but, paradoxically it seems at first, the natural world furnishes the images of art. This idea he derived from Buffier, through Adam Smith's Theory of Moral Sentiment.

> My notion of nature comprehends not only the forms which nature produces, but also the nature and internal fabrick and organization, as I may call it, of the human mind and imagination. The terms beauty, or nature, which are general ideas, are but different modes of expressing the same thing....[1]

This notion rests ultimately on Buffier's theory of the "sens commun." Common sense enables us to "form a common and uniform judgment with respect to objects different from the internal sentiment of their own perception, which judgment is not the consequence of any anterior principle."[2] It is this faculty which enables the artist to form an image of the ideal type of the species he is to imitate, and thus to decide what is worthy of representation, as being the beau ideal.

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1. Discourses on Art, ed. Robert R. Wark, San Marino, California 1959, p. 124.

2. Traité de premières vérités, ch. 5, quoted by E. N. S. Thompson in "The Discourses of Sir Joshua Reynolds," PMLA, Vol. XXXII, 1917, pp. 361-62.

> He who thinks nature, in the narrow sense of the word, is alone to be followed, will produce but a scanty entertainment for the imagination: everything is to be done with which it is natural for the mind to be pleased...
>
> IMITATION is the means, and not the end, of art; it is employed by the sculptor as the language by which his ideas are presented to the mind of the spectator.[1]

Yet the artist must begin by closely studying and comparing natural objects:

> ALL the objects which are exhibited to our view by nature, upon close examination will be found to have their blemishes and defects. The most beautiful forms have something about them like weakness, minuteness, or imperfection. But it is not every eye that perceives these blemishes. It must be an eye long used to the contemplation and comparison of these forms; and which, by a long habit of observing what any set of objects of the same kind have in common, has acquired the power of discerning what each wants in particular. This long laborious comparison should be the first study of the painter, who aims at the greatest style. By this means, he acquires a just idea of beautiful forms; he corrects nature by herself, her imperfect state by her more perfect. His eye being enabled to distinguish the accidental deficiencies, excrescences, and deformities of things, from their general figures, he makes out an abstract idea of their forms more perfect than any one original; and what may seem a paradox, he learns to design naturally by drawing his figures unlike to any one object. This idea of the perfect state of nature, which the Artist calls the Ideal Beauty, is the great leading principle, by which works of genius are conducted.[2]

Reynolds's sanction for this view is ultimately religious, as the ideal type appears to represent "the will and intention of the Creator."

Yet, as much as he insists that nature is the foundation

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1. Op. cit., pp. 127, 177.

2. Ibid., pp. 44-45.

of art, it should be borne in mind that Reynolds is invariably speaking of ideal nature — the general as opposed to the individual. Thus he is able to recommend the study of the art of antiquity as exhibiting ideal types, at the same time as he recommends anatomical study. It is for the abstract beauty of form that the works of the masters and nature alike are valued:

> ...we are sure from experience, that the beauty of form alone, without the assistance of any other quality, makes of itself a great work, and justly claims our esteem and admiration. As a proof of the high value we set on the mere excellence of form, we may produce the greatest part of the works of Michael Angelo, both in painting and sculpture; as well as most of the antique statues, which are justly esteemed in a very high degree, though no very marked or striking character or expression of any kind is represented.[1]

In this, as in their treatment of the ideal in relation to natural form, Reynolds and his followers Fuseli, Opie and Haydon, differ sharply from writers of the early nineteenth century. In Reynolds's time, Greek art had been known largely from inferior Roman copies. But with the advent of the Elgin Marbles, attitudes to the imitation of nature changed. This is especially evident from the work of William Hazlitt, who thinks that the method of instruction in the Discourses "places full reliance neither on art nor nature, but consists in a kind of fastidious tampering with both. The height of invention is made to consist in compiling from others,

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1. Ibid., p. 177.

and the perfection of imitation is not copying from nature."[1] As an antidote to this "process of fastidious refinement, and flimsy abstraction" Hazlitt recommends the study of the Elgin Marbles.

> The figures have all the ease, the simplicity, and variety of nature, and look more like living men turned to stone than any thing else. Even the details of the subordinate parts, the loose folds in the skin, the veins under the belly or on the sides of the horses, more or less swelled as the animal is more or less in action, are given with scrupulous exactness. This is true nature, and true history.[2]

In Hazlitt's strictures on Reynolds's theory of the ideal form, we can see a reflection of the controversy concerning the value of the study of anatomy to the artist. Following Reynolds, most practising artists writing on the creative process advocated detailed study of nature, but the degrees to which they considered the study of anatomy necessary varied. Flaxman believed that success in the imitation of human and animal figures depended on the state of anatomical science. The Greek gymnasium was a source for the perfection of figure seen in the statues of the ancients, but

> There is reason to believe that those groups and statues which are pre-eminent in the display of anatomical skill were not executed until after the age of Alexander the Great, when Hierophilus and Erasistratus had enlarged the bounds of

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1. "Introduction to an Account of Sir Joshua Reynolds' Discourses," I, in The Complete Works of William Hazlitt, ed. P. P. Howe, London 1930, Vol. XVIII, p. 63. Originally in The Champion, Nov. 27, 1814.

2. Part IV, "On the Ideal," loc. cit., p. 81. Originally in The Champion, Jan. 8, 1815.

> anatomical science, by numerous dissections in the school of Alexandria.[1]

To Flaxman, beauty is not an imaginary quality, but a real essence. Roughly contemporary with Reynolds's followers and Flaxman, Sir Charles Bell, a physician, took this empirical quest for beauty to extremes in his Anatomy of Expression. On the other hand, the painter-aestheticians of the Academy, Fuseli, Opie and Haydon continued Reynolds's ideas without adding anything of importance to his views on the ideal form, although in Opie's work it is possible to discern what was to appear more clearly in the work of Ruskin and his contemporaries — a confusion about the nature of idealism due to an increasing preoccupation with empiricism. The Reynolds school were the last of the Neo-classicists who were now to give way to writers who found new inspiration in nature.

It is a commonplace of criticism that Wordsworth led the Romantic revolt against the mechanistic aesthetics of Neo-classicism. Complementing Reynolds's imitation theory was the Associationist psychology which saw the imagination essentially as a passive mode of memory. In opposition to these views, Wordsworth set up his own theory of the imagination which presented its activity as vitally creative. In the Neo-classicist view, art and life were forever discrete. With Wordsworth, art and life were one. In expressing

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1. Lectures on Sculpture, 2nd ed., London 1838. First published 1829.

his views, Wordsworth resorted to the metaphor of organism. Man's mind grew in a close organic relationship with nature, and as part of this process, works of art — specifically poetry — were produced. It is in this particular sense that it can be most truly said that Wordsworth's notion of form in art was organic.

In sketching his conception of the relationship between form in art and the creative process, it is natural to begin with his remarks on the latter in The Prelude, in which he attempts to trace "the growth of a poet's mind" — his own. From the beginning of life, the "seed-time" of the soul, Wordsworth thinks, we are involved in creative activity. The infant's act of perception is a creative one. As Francis Christensen has said, "Quite literally, the child's first poetic act is the creation of his mother."[1] Christensen is thinking of the passage in Book Second wherein is described the child's first sensations. The organic growth metaphor is conspicuously present throughout the poem and appears here as the process of assimilating nourishment. The child, "with his soul/ Drinks in the feelings of his Mother's eye!"

Indeed, as was noticed in the first chapter of the present thesis, Wordsworth's conception of feeling was fundamentally organic. This point is often overlooked by critics who see Wordsworth's

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1. "Creative Sensibility in Wordsworth," JEGP, Vol. XLV, 1946, p. 363.

contribution to aesthetics simply as a revolt in favour of an expressive, as against a formal theory of poetry. But Wordsworth's insistence on the importance of feeling in the creative process goes deeper than a mere whipping-up of recollected emotion, as is sometimes asserted. It is organic feeling that makes possible the whole process of the growth of the mind in the context of nature, and, indeed, as part of the organic process of the world. The child's organic feeling leads him to create forms and to assess their beauty -- he already feels sensations similar to those described in the Tintern Abbey passage quoted in Chapter One. He is linked to nature by feelings basically organic:

> No outcast he, bewildered and depressed:
> Along his infant veins are interfused
> The gravitation and the filial bond
> Of nature that connect him with the world.
> Is there a flower, to which he points with hand
> Too weak to gather it, already love
> Drawn from love's purest earthly fount for him
> Hath beautified that flower....[1]

Christensen has further remarked that "the senses themselves are creative." This can be seen from a consideration of some lines following the passage just quoted. Already the imagination is at work in the child.

> For feeling has to him imparted power
> That through the growing faculties of sense
> Doth like an agent of the one great Mind
> Create, creator and receiver both,

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1. Op. cit., p. 55, ll. 241-48.

> Working but in alliance with the works
> Which it beholds. — Such, verily, is the first
> Poetic spirit of our human life....[1]

The imagination, then, is operative as soon as organic feeling is present, for it is a function of this feeling. The imagination, the "plastic power" or "forming hand" of the poetic faculty, may be said to be truly vital and organic, despite the often-acknowledged element of associationism in Wordsworth's thinking about the effects of natural objects on the mind. His language insists repeatedly that the imaginative faculty is organic: he "drinks visionary power," all his thoughts are "steeped in feeling," and this feeling is experienced as "drinking in a pure/ Organic pleasure" from the objects of the natural world. Furthermore, in the early Preface to Lyrical Ballads, Wordsworth states that the feelings that are the fountainhead of poetry are part of our animal being. The poet feels as ordinary men feel, but to a greater degree on less occasion, and with a greater faculty of expressing his feelings:

> ...these passions and thoughts and feelings are the general passions and thoughts and feelings of men. And with what are they connected? Undoubtedly with our moral sentiments and animal sensations, and with the causes which excite these....[2]

It has been noted by critics that Wordsworth's creative

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1. Ibid., pp. 55-57, ll. 255-61.

2. Poetical Works, Vol. II, p. 397.

sensibility reacts particularly strongly in the presence of the sublime. Early in The Prelude, we find a passage on the imagination, in which the poet is shown in an elevated mood, and storm, rocks and a suggestion of the supernatural — all conventional paraphernalia of the sublime — form the setting.

> If the night blackened with a coming storm,
> Beneath some rock, listening to notes that are
> The ghostly language of the ancient earth,
> Or make their dim abode in distant winds.
> Thence did I drink the visionary power....[1]

It has been claimed that Wordsworth did not trust the imaginative power until the incident of the crossing of the Alps when he again felt the power of the sublime to call forth the visionary faculty in man. But in view of the above passage, and of the fact that he later came to describe the imagination as "reason in her most exalted mood" and to rely increasingly on judgment in poetic matters, this seems hardly tenable. In fact, the reverse seems true.

But what is of more interest is that in the early Preface to Lyrical Ballads, the poet appears as a man of "more than usual organic sensibility," while in the Preface to the 1815 edition, we find the primary requisite for the poet to be the ability to observe and describe with precision. Now it was said above that the imagination operated through intense feeling and especially, perhaps, if that feeling were aroused by the sublime. It is also a well-known

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1. Op. cit., p. 59, ll. 307-311.

fact that Wordsworth took a great interest in the picturesque, which, like the sublime, was enjoying a considerable vogue in his early years. James Heffernan has made a particular point of this. He has mentioned the influence of picturesque writers like William Gilpin, Dr John Brown, and John Scott of Amwell. Wordsworth's association with Uvedale Price and Foxley is, of course, well-known through Wordsworth's letter to Sir George Beaumont. From a letter to Dorothy Wordsworth in 1790, we know that he was interested in the picturesque, and his Guide to the Lakes, which appeared twenty years later, shows that the interest was an enduring one. That, for Wordsworth, the picturesque was linked to deep feeling and therefore imaginative experience is suggested by Heffernan's comment on the Guide to the Lakes: "This profound concern for emotional values, over and above pictorial ones, sharply distinguishes Wordsworth's Guide to the Lakes from its numerous predecessors."[1] It would seem, then, that early on, the picturesque and the sublime were two powerful imaginative motives in Wordsworth. The primacy, then, of the ability to describe objectively — which seems to be what Wordsworth is advocating in the 1815 Preface — seems at variance with the earlier idea of the imagination. In fact, this may be an interesting reflection of the change in popular taste at the time, regarding nature. The heyday of the picturesque and sublime was the 1790's.

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1. Wordsworth's Theory of Poetry: the Transforming Imagination, Ithaca 1969, p. 25.

The taste for these was declining by the early 1800's, for there was now a new competitor for the public's leisure interest — the activity of collecting, describing, and classifying botanical and geological specimens. This new, more objective attitude to nature is perhaps reflected in the new implement in the equipment of Wordsworth's ideal poet — fidelity to the material detail of natural objects.

After this digression, let us return to the consideration of the poetic faculty. It was said that this organic power of creative sensibility or perception is present in man from his earliest life, but in some, like Peter Bell, it deteriorates and eventually vanishes. It needs constant communion with nature to nourish and develop it. Wordsworth tells us that in this, he was lucky:

> from my first dawn
> Of childhood didst thou intertwine for me
> The passions that build up our human soul;
> Not with the mean and vulgar works of man,
> But with high objects, with enduring things —
> With life and nature, purifying thus
> The elements of feeling and of thought,
> And sanctifying, by such discipline,
> Both pain and fear, until we recognise
> A grandeur in the beatings of the heart.[1]

This introspective approach to the question of the creative process has a more objective counterpart in the description of the materials of poetry in the early Preface. In trying to avoid the mechanical formalist attitude of Neo-classicism, Wordsworth is careful to approach the discussion of the writing of poetry through the poet's

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1. Ibid., p. 25, ll. 405-414.

feeling response to men and nature. To him, poetry is "the image of man and nature," and at this stage, this is a sufficient basis for formal theory. Indeed, the achievement of form is discussed, as can be seen from the foregoing remarks, as a process of growth, and the materials of poetry are seen through this perspective. If we take the last quotation, in which we saw feeling intertwined with the objects of nature, closely with Wordsworth's description of his poetic materials in the Preface, the rationale of this notion of form becomes obvious. The poet is to choose "incidents and situations from common life," then trace in them "the primary laws of our nature." To this end

> Humble and rustic life was generally chosen, because, in that condition, the essential passions of the heart find a better soil in which they can attain their maturity,...and speak a plainer and more emphatic language; because in that condition of life our elementary feelings coexist in a state of greater simplicity, and consequently, may be more accurately contemplated, and more forcibly communicated; because the manners of rural life germinate from those elementary feelings, and, from the necessary character of rural occupations, are more easily comprehended, and are more durable; and, lastly, because in that condition the passions of men are incorporated with the beautiful and permanent forms of nature.[1]

It is easy to see from this why, at this stage, Wordsworth sees no need to impose traditional methods and patterns on his poetry for the achievement of form. The matter of the poetry in itself provides the only formal elements necessary. In delineating rural

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1. Poetical Works, Vol.II, pp. 386-87.

life, he is in fact describing an organism — man's life in nature — and the perception of truths about this generates spontaneously a vital organization for his poetry. Art is both the image of the life process and a function of it. At the same time, by purifying his rustic language and throwing over his material the "colouring of imagination," Wordsworth satisfies the classic criteria of general truth and ideal beauty.

In considering the role of form in relation to the creative process in respect to the treatment of the supernatural, an interesting fact is at once noticeable. Wordsworth seems anxious to get rid of the traditional formal devices as the foundation of poetry. Personification and other traditional formal aids are to be dispensed with. In relation to the creative process form is contemplated more from the point of view of nature than of art. Form in nature is the agent of visionary power in man. As has been mentioned in relation to the sublime, the forms of nature may work through feeling to stimulate the creative faculty in the mind. The boating incident in The Prelude suggests this. Terrified initially by the sight of the mountain which seemed to pursue him, the young Wordsworth exists thereafter for some time in a highly excited state of mind.

> after I had seen
> That spectacle, for many days, my brain
> Worked with a dim and undetermined sense
> Of unknown modes of being; o'er my thoughts
> There hung a darkness, call it solitude

> Or blank desertion. No familiar shapes
> Remained, no pleasant images of trees,
> Of sea or sky, no colours of green fields,
> But huge and mighty forms, that do not live
> Like living men, moved slowly through the mind
> By day, and were a trouble to my dreams.[1]

It is above all the forms of natural objects that work on the "more than usual organic sensibility" of the poet to produce the images which form the basis of truths about eternal reality. And these are, as we have seen, in Chapter One, another major element in the organization of Wordsworth's poetry. Poetry can take its origin from other sources than the components of conventional form. Even metre is relegated to the role of superadded charm. In Wordsworth's discussion of the creative process, form is seen purely in the context of the subjective experience of the poet in nature, and arises in art naturally through feeling, as the result of a truly organic process of mental growth. To complete the system, reference to the supernatural import of natural form provides an ultimately religious sanction for his aesthetic. It is probably more accurate to represent Wordsworth's theory of form as primarily the product of Neo-classicism and organicism, rather than as a revolt of pure expression against formalism. The new theory purposes to meet the old ends of Neo-classicism, but to do so by implementing a new vitalistic theory of method.

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1. Op. cit., p. 25, ll. 390-400.

With the Preface of 1815, however, a drift back in the direction of Neo-classic formalism is evident. Although the prime requisite for the poet now, as has been said, is the ability to observe accurately — which seems to suggest a disregard of Neo-classic idealism — the new emphasis on the faculties of judgement, invention, and fancy, and the utilisation of conventional genres as a means of achieving or distinguishing poetic form suggest that confidence in the organic model has waned. Indeed, a new distinction between form and matter results. The organic experience of the poet finds its use now merely in gathering the materials of poetry, which are then "cast, by means of various moulds, into divers forms," — a return to the mechanical metaphor. Curiously enough, however, in arranging the poems of the 1815 edition, Wordsworth, as Scoggins and Owen[1] have pointed out, has clung to the old growth theory. The poems are arranged to show the progressive development of the mind — "that the work may more obviously correspond with the course of human life." But this method of organization no longer appears adequate to Wordsworth. He introduces new criteria for classification, using the existence of traditional genres as a justification. Poems may now "with propriety be arranged either with reference to the powers of mind predominant in the pro-

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1. Imagination and Fancy: Complementary Modes in the Poetry of Wordsworth, Lincoln, Nebraska 1966, p. 71. Wordsworth as Critic, Toronto 1969, p. 151.

duction of them; or to the mould in which they are cast; or lastly, to the subjects to which they relate."[1]

Moreover, the new premium placed on the power of accurate observation brings with it the implication that the imagination is no longer all-powerful. This is further stressed by the definition of the roles of judgement, fancy, and invention. The function of the judgement in relation to the others is particularly revealing of the new trend. It is to

> ...decide how and where, and in what degree, each of these faculties ought to be exerted; so that the less shall not be sacrificed to the greater; nor the greater, slighting the less, arrogate, to its own injury, more than its due. By judgment, also, is determined what are the laws and appropriate graces of every species of composition.[2]

A greater emphasis is thus given to mechanically-imposed form. The imagination remains the basis of poetry, but its operations are confined to discrete areas of poetic activity. Poetry seems now in danger of becoming the product of the mechanical operations of a number of distinct faculties towards a formalistic end, rather than the spontaneous, vital growth of the earlier Preface.

In his recent study Coleridge and Wordsworth, the Poetry of Growth, Stephen Prickett has suggested that Wordsworth was not entirely aware of the philosophical implications of the organic

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1. Poetical Works, Vol. II, p. 433.

2. Op. cit., p. 432.

metaphor he was using. Prickett points to the fact that the "overtly associationist description of growth" from lines 244 to 257 in the 1805 version of The Prelude were omitted from the 1850 version. This, he thinks, is due, not to Wordsworth's swing away from Hartleyism, but to his failure to recognise the scientific context of his thought.

> The mistake is to see Wordsworth as a philosopher at all. Like Coleridge, he was looking for an intellectual framework that would formalize his vivid intuitive and observational grasp of mental development. I think it would be possible to show, for example, that the whole of the omitted passage is perfectly consonant with Kantian principles — an illustration of 'epigenesis.' I do not believe for one moment that it is: merely that Wordsworth's account of childhood development was based not on any philosophical theory, but only on common-sense observation of babies.[1]

To accept Prickett's view we must ignore the scientific implications in Wordsworth's use of language as indicated in reference to the Tintern Abbey passage quoted in Chapter One of this thesis. We must discount, too, the considerable influence of Coleridge — which Prickett himself admits. A more likely explanation of Wordsworth's seeming rejection of this early Associationism is that he merely shifted his interest in Associationism from the atomistic and physiological theory of Hartley to the "faculty" approach of Thomas Reid and Dugald Stewart — two of the foremost of the Associationist psychologists. As the trend for "faculty" psychology

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1. Cambridge 1970, p. 91.

in fact replaced that of Hartleyism, it would appear that, considering the tendency of the more faculty-oriented 1815 Preface, Wordsworth was modifying his theories to keep pace with what was most fashionable in science. It seems, then, to be not in the least farfetched to ascribe to Wordsworth a conscious use, earlier in his career, of the concept of epigenesis as an analogue for the creative process.

This theory seems especially valid in view of the great freedom with which his friend Coleridge employed the concept of organic growth, as demonstrated by M. H. Abrams in The Mirror and the Lamp.[1] Before entering into a discussion of Coleridge's use of organicism, however, it is necessary to supply a little background information on the progress of theories of growth directly prior to, and during, the period under discussion.

There were two principal theories to account for the phenomena of growth current in the late eighteenth century. The first and more orthodox of these was that of preformation or emboîtement. According to this view, put forward most efficiently by the Swiss physiologist, Albrecht von Haller, working at Göttingen, the organism complete in every detail was present in the germ, so that growth merely implied enlargement. In other words, the process appeared a mechanical one, and no organism was endowed with the ability to

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1. The Norton Library, New York 1958, p. 218. First published Oxford 1953.

generate any new form by means of its own vital processes. The form was determined from the beginning of the individual life -- according to some theorists, from the commencement of all life, the creation -- and nothing new could arise spontaneously. The epigenetic theory, in opposition to this, held that new formation was the means by which the organism arrived, from its first elementary form, at its adult state. The great exponent of this view was, of course, Caspar Friedrich Wolff, of the Academy of the Empress Catherine in St Petersburg. His Theoria Generationis, a theoretical and philosophical defence of epigenesis which appeared in 1759, described the monad (borrowed from Leibniz) developing into an organism by means of its own vital force. To complete his theory, Wolff borrowed from Stahl the theory of a vital generative force in nature. He carried on a controversy with Haller for some years, ending with the triumphant publication in 1768 of Wolff's De Formatione Intestinorum disproving Haller's theory. In spite of this setback, however, the considerably greater influence of Haller prevailed, and Wolff's theory did not gain general acceptance until 1812, when Meckel published a translation of his work.

However, in the last years of the eighteenth century, the epigenetic theory made considerable headway. It had always had its adherents, and a major figure among these and one that is of particular interest here, for his connection with Coleridge, is Johann Friedrich Blumenbach. Blumenbach was mentioned in Chapter One in

outlining the contemporary ideas of vitalism. As has already been hinted above, the preformationist theory tended to become identified with the mechanistic philosophy, and the epigenetic with the vitalist philosophy. The division is not as thorough-going as Driesch claims. Needham has pointed out that some mechanists -- Maupertuis, for example -- were in favour of epigenesis.[1] Given the vitalistic tendencies of the mechanistic philosophy of Maupertuis, as remarked on in the last chapter, this is not surprising. Nor is it unexpected that an eclectic like Coleridge would ignore divisions and sects to choose the elements that seemed most apt for his purpose from a variety of organic theories, including both Maupertuis and Blumenbach, however these were popularly classified.

We know that, during his time in Germany, Coleridge attended lectures on natural science and physiology given by Blumenbach, and intended translating part of his work. From these contacts, he no doubt absorbed the doctrine of epigenesis and vitalism. Blumenbach's Institutiones Physiologicae gives us a brief insight into the nature of these. While he asserts that the "vital energy is the very basis of physiology" he is compelled to admit that "its nature and causes are most obscure." Blumenbach then establishes the various orders of the vital powers, as was mentioned in Chapter One, and follows this up with a discussion of the nisus formativus.

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1. Chemical Embryology, Cambridge 1931, Vol. I, pp. 206-207.

> Even in our memory, some physiologists of reputation have contented themselves with roundly asserting that true generation never occurs, but that the whole human race pre-existed in the genitals of our first parents, in the shape of previously-formed germs which become evolved in succession.

Epigenesis on the other hand, supposes

> ...not an evolution of fictitious germina by conception, but a true and gradual formation of a new conception from the hitherto formless genital matter.
>
> This true generation by successive formation has been variously described by physiologists, but the following we consider as the true account:
>
> 1. The matter of which organized bodies, and therefore the human frame, is composed, differs from all other matter in this, that it alone is subject to the influence of the vital powers.
> 2. Among the orders of vital powers, one is eminently remarkable and the least disputable of all, — which, while it acts upon that matter hitherto shapeless but mature, imparts to it a form regular and definite, although varying according to the particular nature of the matter. To distinguish this vital power from the rest, permit us to designate it by the term, — NISUS FORMATIVUS.[1]

It is a well-known fact that Coleridge borrowed his distinction between mechanical and organic form in art from A. W. Schlegel, and that he was familiar with Kant's use of organicism. But in Blumenbach's nisus formativus we see the basic model for the organic metaphor as it was used by Coleridge in theorising about the creative process in art. The nisus formativus is an exclusively human faculty. Again, the very mysteriousness of the nature of the vital

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1. The Institutions of Physiology, trans. from the Latin of the 3rd ed. by John Elliotson, 2nd ed., London 1817, pp. 17-18, 333-35.

powers and the action of epigenesis worked in favour of their adoption as a model for a fundamentally supernatural and introspective theory of art. Coleridge frequently referred to the creative power of the artist as "magical," and both Kathleen Coburn and Appleyard have noted the Coleridgean association of the word "dimness" with the process of growth as well as of introspection accompanied by deep feeling — two major elements in his poetic theory.[1]

As might be expected, Coleridge's organic theory of the creative process had much in common with Wordsworth's. But a basic difference is evident in the pre-eminence given by Coleridge to will over organic feeling. Critics have more than once remarked that Wordsworth's organicism was leading him in precisely the direction he wished to avoid — that of mechanism. But the organic aspect hardly enters into Coleridge's idea of the feelings associated with the creative process. Early on, he toys with the idea that thought may be a merely physiological phenomenon, but this is not retained in his mature theory of creativity.

Abrams has brought to light the proliferation of the plant metaphor throughout Coleridge's writings which he describes as "a very jungle of vegetation." It is not intended to offer Blumenbach as an exclusive or original source for Coleridge's organic metaphor.

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1. Appleyard, op. cit., p. 89 and note.

Indeed, Abrams points out that this line of thought ante-dated Coleridge's acquaintance with Blumenbach, and in addition to the German Idealists already mentioned, he notes other sources in contemporary English physiology: Coleridge gives the properties of the plant, as distinct from the mechanical system first in a letter to John Thelwall, in December, 1796, two years before the trip to Germany. The references

> ...culminate in his Theory of Life, which incorporates various concepts from the German Natur-Philosophen and from the discoveries and speculations of English 'dynamic' physiologists such as Hunter, Saumures, and Abernethy.[1]

Abrams then proceeds to show how the characteristic properties of the plant are all reflected in the language in which Coleridge describes the imaginative process: the plant originates in a seed, — the poem in a unity — both grow, assimilate to their own substance alien and diverse elements, and finally achieve organic unity by developing "spontaneously from an internal source of energy."

This last is of especial interest. Pointing out that Coleridge's favourite method of indicating how mechanic differs from organic development is to state that the latter implies growth from within, he offers A. W. Schlegel as a source for Coleridge's distinction between organic and mechanic form. Nothing, however, is said about the "internal source of energy." But if we take these

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1. Op. cit., p. 170.

elements of Coleridge's thought in conjunction with his famous passage on the imagination in Chapter Thirteen of Biographia Literaria, an interesting fact emerges. The secondary imagination — the poetic faculty — is described as "co-existing with the conscious will." The two work together. It is only in close union with the will that the imagination "essentially vital," "dissolves, diffuses, dissipates, in order to recreate," or "struggles to idealize and unify." The will thus seems to serve the function of energizing the imagination — elsewhere Coleridge speaks of the artist's "mighty inward power" — and the stress is on the vital, purposive, nature of the process. In relation to this, Blumenbach's note on his use of the term nisus, which can be translated as "striving," is of special interest:

> The word nisus I have adopted chiefly to express an energy truly vital, and therefore to distinguish it as clearly as possible from powers merely mechanical, by which some physiologists formerly endeavoured to explain generation.[1]

Here we have two of the factors present in Coleridge's description of the creative process: vitality and effort. Obviously, Blumenbach's nisus formativus does not provide an exact analogue for Coleridge's conception of the creative process, but it sheds light on how Coleridge conceived of the actual functioning of the imagination in producing an organic form. In this way it not only helps fill out Abrams's account of organicism, but supports what must be

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1. Op. cit., p. 336.

obvious to anyone more than superficially acquainted with Coleridge's thought. His theory originates in a more thorough acquaintance with and understanding of the nature of contemporary thought than would be concluded from the fact that his thought on organic form shows affinity with A. W. Schlegel's. Natural science is as present to Coleridge's mind as metaphysics — or, to put it more precisely — Coleridge has material enough to construct his own metaphysic.

To explain a difficulty is not to explain it away, but the account of the vital energy given above does illuminate a difficulty in Coleridge's thought. With Wordsworth, the organic metaphor seemed to lead in the direction of unconscious mechanism. Coleridge tried to avert this by intervening the will — with limited success, as Abrams notes:

> In Coleridge's aesthetics, no less than in his ethics and theology, the justification of free-will is a crux — in part, it would appear, because this runs counter to an inherent tendency of his elected analogue.[1]

But we can see from a consideration of the almost deliberate nature of Blumenbach's nisus formativus that Coleridge does not see the unconscious nature of plant development as "the inherent tendency of his elected analogue." He sees the process of organic development rather as purposive.

The preference for conscious control in the creative process results in a further difference from Wordsworth. In Wordsworth,

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1. Op. cit., p. 174.

the feelings, it has been shown, were largely of an organic nature. The animal sensations played a considerable part in the creative process. With Coleridge, these are to be subordinated to thought:

> ...I have laid particular stress on the words "human mind," — meaning to exclude thereby all results common to man and all other sentient creatures, and consequently confining myself to the effect produced by the congruity of the animal impression with the reflective powers of the mind; so that not the thing presented, but that which is re-presented by the thing, shall be the source of the pleasure.[1]

Similarly the metre, which in Wordsworth was superadded for delight, becomes, in Coleridge, a product of the will for formal ends. Wordsworth's approach to metre refers merely to the "superficial form." A "legitimate poem," on the other hand,

> ...must be one, the parts of which mutually support and explain each other; all in their proportion harmonising with, and supporting the purpose and known influences of metrical arrangement.[2]

In other words, metre is vitally interfused with the other elements of composition -- all interact with each other and can exist only, like the parts of any organism, by means of mutual support.

But the role of the metre is given a certain predominance. We have seen that will and reflection are as important to the creative process as feeling. This is further evidenced in Coleridge's theory of metre. Its origin is "the balance in the mind effected

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1. "On Poesy or Art," repr. in Biographia Literaria, ed. J. Shawcross, Oxford 1907, Vol. II, p. 254.

2. Biographia Literaria, Vol. II, p. 10.

by that spontaneous effort which strives to hold in check the workings of passion." Since metre is the result of a state of increased excitement, it should be "accompanied by the natural language of excitement." In this way it can be said to contribute to the generation of form, as it initiates the selection of language in keeping with a certain decorum. However, metre is not to usurp the governing office, and impose mechanical form. There should be "an interpenetration of passion and of will, of spontaneous impulse and of voluntary purpose." The metre remains the implement of controlled feeling, as do the other aspects of composition.

Fogle has remarked that, while Coleridge is interested in the theory of genres, he differs markedly from the Neo-classical critics in that his theory of genres is based on the notion of organic unity. Certainly he differs from Wordsworth, whose theory of genres, like his theory of metre, is rooted in very shallow soil. Fogle explains Coleridge's metaphysical approach as follows:

> His procedure and his terminology are dialectical or "polar." Reality is always organic unity or wholeness, but this reality can only be discursively revealed as two, in the form of polar opposites reconciled, or of centripetal and centrifugal forces in equilibrium. In aesthetics this principle involves the full acceptance of the doctrine of organic unity of form and content, but at the same time it preserves their distinctness as concepts, for without their twoness organic unity would be structureless and unintelligible.[1]

Precisely how this dialectic functions in the case of form and content

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1. The Idea of Coleridge's Criticism, Berkeley, California 1962, pp. 4-5.

is not clear from Fogle's subsequent remarks, if by form is meant anything analogous to the Neo-classical genres. It is significant that Fogle drops the subject and immediately takes up in its place the theory of the imagination and the organic growth theory. Coleridge's true position on genre appears ambivalent. The purpose of poetry is, continuing the organic metaphor, "to communicate from each part the greatest immediate pleasure compatible with the largest sum of pleasure on the whole." But immediately, the means of pleasure is subordinated to the mechanical exigencies of a particular genre or form:

> This, of course, will vary with the different modes of poetry; — and that splendour of particular lines, which would be worthy of admiration in an impassioned elegy, or short indignant satire, would be a blemish and proof of vile taste in a tragedy or an epic poem.[1]

It would seem then, that, despite Fogle's argument that Coleridge's view of genre was organically founded, by virtue of his theory of the imagination as resolving polarity, more than a vestige of the old Neo-classical approach to form remains.

In discussing the imitation of nature, Coleridge seems on firmer ground. He does not, like Wordsworth, attempt to make the forms of nature serve a double purpose of copy on the one hand and vision on the other. Rather the artist must rise above mere copying by imitating the vital beauty of nature, not the dead form.

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1. "Lecture Notes and Other Fragments," in Shakespearean Criticism, ed. T. M. Raysor, Everyman, London 1960, Vol. I, p. 148.

The beauty of nature is

> ...in the abstract, the unity of the manifold, the coalescence of the diverse; in the concrete, it is the union of the shapely (formosum) with the vital....
>
> If the artist copies the mere nature, the natura naturata, what idle rivalry! If he proceeds only from a given form, which is supposed to answer to the notion of beauty, what an emptiness, what an unreality...! Believe me, you must master the essence, the natura naturans, which presupposes a bond between nature in the higher sense and the soul of man.[1]

The artist is to imitate both the products and the process of nature. The creative process of art will then be similar to the creative process of nature, with the difference that art is deliberate, nature unconscious. The resulting form in art will be, thus, truly organic:

> The form is mechanic when on any given material we impress a predetermined form, not necessarily arising out of the properties of the material.

Blumenbach, it is interesting to remark in passing, states that the nisus formativus imparts to matter a form "varying according to the particular nature of the matter." To Coleridge, form in art can be said to be organic when it is "innate." It

> ...shapes as it develops itself from within, and the fullness of its development is one and the same with the perfection of its outward form. Such is the life, such the form. Nature, the prime genial artist, inexhaustible in diverse powers, is equally inexhaustible in forms. Each exterior is the physiognomy of the being within, its true image reflected and thrown out from the concave mirror.[2]

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1. "On Poesy or Art," op. cit., p. 257.

2. "Lecture Notes and Other Fragments," op. cit., Vol. I, p. 198.

Shakespeare, the ideal poet, is "a nature humanized." In extending the organic metaphor to include imitation Coleridge avoids, too, a lapse into empiricism in approaching the question of the ideal form. Rather, he stresses that the

> ...artist must imitate that which is within the thing, that which is active through form and figure, and discourses to us by symbols — the Natur-geist, or spirit of nature....The idea which puts the form together cannot itself be the form. It is above form, and is its essence, the universal in the individual, or the individuality itself, -- the glance and the exponent of the indwelling power.[1]

We find then, in both Wordsworth and Coleridge, an attempt to give a new ascendancy to the role of nature in the creative process. They both try to found a rationale of art on the basis of the organic metaphor. In Wordsworth the approach is through the suggestions of natural science regarding man's feeling nature and through his assimilation of this to contemporary psychology. He relies a great deal of course, on observation of nature, of man's life in nature, and to a persevering introspection. By contrast, Coleridge uses contemporary science in a much more elaborate and consistent metaphysical construction. He attempts to comprehend the whole province of art, whereas Wordsworth is bound largely to the subjective experience of the poet. Curiously enough, though Coleridge's is the more impressive performance of the two, the trends discernible in Wordsworth's theories tended to be taken up

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1. "On Poesy or Art," op. cit., p. 259.

by later writers. Coleridge's metaphysics — his imagination and organic theories — were put aside in favour of the Associationist approach to creativity and of the empirical observation of nature.

This is, of course, in keeping with current tendencies of thought generally. Abrams has remarked, regarding Associationism:

> In spite of his valiant efforts, Coleridge failed to give any substantial check to the elementarist philosophy of mind in England. Indeed, the system only achieved its most detailed and uncompromising statement in 1829, with the Analysis of the Phenomena of the Human Mind of James Mill — "the reviver and second founder," as his son said, of Hartley's associationist psychology.[1]

The prestige of metaphysical enquiry declined sharply in the mid-nineteenth century. It will be recalled, too, that in Chapter One of the present essay it was said that the middle decades of the century saw a great growth of interest in questions concerning the exact description of form in the natural sciences. The work of a good many aesthetic writers of these decades shows a strong interest in associationism and the criteria of form, as well as some confusion concerning the latter, but none more so than that of Ruskin.

It has already been remarked in the previous chapter that Ruskin confounded Platonic with Lockean notionsof form. It was suggested that this was due to his predominant tendency to approach

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1. Op. cit., p. 177.

form in nature empirically. Although Ruskin insisted on fidelity to the detail of nature, he was unwilling to give up the notion of the ideal for it. Thus, he was led into prescriptions like the following for what was to be the aim of the artist.

> The true ideal of landscape is precisely the same as that of the human form; it is the expression of the specific — not the individual, but the specific — characters of every object, in their perfection. There is an ideal form of every herb, flower, and tree, it is that form to which every individual of the species has a tendency to arrive, freed from the influence of accident or disease.[1]

This seems to be very much like Reynolds's general truth, but later, Ruskin tries to modify Reynolds's view. He is convinced of the falsity of the maxim "General truths are more important than particular ones."

> ...it is carelessly and falsely said that general ideas are more important than particular ones; carelessly and falsely, I say, because the so-called general idea is important, not because it is common to all the individuals of that species, but because it separates that species from everything else. It is the distinctiveness, not the universality of the truth, which renders it important. And the so-called particular idea is unimportant, not because it is not predicable of the whole species, but because it <u>is</u> predicable of things out of that species. It is not its individuality, but its generality which renders it unimportant.[2]

Here, while avoiding direct rejection of his first principle — the representation of the ideal — Ruskin seems almost to be indirectly supporting his preference for individuality. Earlier he claims that

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1. <u>Modern Painters</u>, Vol. I, p. 27
2. <u>Modern Painters</u>, Vol. I, p. 152.

"botanical or geological details are not to be given as matter of curiosity or subject of search, but as the ultimate elements of every species of expression and order of loveliness,"[1] — but details are explicitly required, nonetheless. It would seem that Ruskin wants to advocate simultaneously adherence to the general and the individual. Certainly, his scheme for arriving at the ideal is the same comparative study of natural objects as Reynolds recommends. However, Ruskin is reluctant to admit its validity.

> Let us ask..., first, what kind of ideal form may be attributed to a limpet or an oyster; that is to say, whether all oysters do or do not come up to the entire notion or idea of an oyster. I apprehend that, of those which are of full size and healthy condition, there will be found many which fulfil the conditions of an oyster in every respect; and that so perfectly, that we could not, by combining the features of two or more together, produce a more perfect oyster than any that we see.[2]

Yet when we come to his remarks on the imitation of nature, we find that the ability to imitate closely is not seen as giving any marked notion of power in the artist, nor as affording us any but what Ruskin regarded as the lowest sort of pleasures. It is "necessary to their enjoyment that the mind should reject the impression and address of the thing represented, and fix itself only upon the reflection that it is not what it seems to be. All high or noble emotion or thought is thus rendered physically impossible...."[3]

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1. Ibid., p. 28.
2. Modern Painters, Vol. II, p. 167.
3. Modern Painters, Vol. I, p. 102.

Moreover, this sort of imitation is possible only of "mean and paltry" subjects. Ruskin knows from observation that mountains and clouds are impossible to imitate precisely, yet somehow he has to support his ideal of truth to nature. We have to look further than the craft of imitation if we want the truth to nature which Ruskin, on one principle or another, seems to be everywhere urging.

He attempts to provide a solution with his notion of ideas of truth. But his definition of truth seems to take in imitation. It is "the faithful statement, either to the mind or senses, of any fact of nature." He proceeds however, to distinguish between imitation and truth:

> Imitation can only be of something material, but truth has reference to statements both of the qualities of material things, and of emotions, impressions, and thoughts. There is a moral as well as material truth, -- a truth of impression as well as of form, -- of thought as well as of matter: and the truth of impression and thought is a thousand times the more important of the two.[1]

Ruskin then attempts a further distinction by stating that truth can exist independent of imitation, by the use of symbol. Furthermore, to achieve truth, only one attribute of an object need be represented, whereas imitation demands as complete a representation as possible. These statements accord ill with Ruskin's earlier concept of fidelity to the detail of nature; the confusion between the ideal and the individual which is perceptible throughout his

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1. Ibid., p. 104.

theory is most apparent here. His aim is, without recourse to metaphysics, to reconcile his theory of the divine origin of the natural world through the use of a precariously-based idealism with his other great preoccupation -- the detail of natural form.

His approach to the psychology of creativity follows a predictable pattern. In dealing with the problem of nature and the ideal, he tries to diminish the role of metaphysics, and both uses and rejects Reynolds. Here, while he does not accept the Associationist theory of the imagination, especially as expressed by Dugald Stewart, he follows the Associationist system of division into three faculties in his own analysis of the imagination. Stewart divides the imagination into the functions of conception, abstraction, and associative fancy. Ruskin puts forward the following scheme of the three powers of the imagination:

> It combines, and by combination creates new forms; but the secret principle of this combination has not been shown by the analysts. Again, it treats, or regards, both the simple images and its own combinations in peculiar ways; and thirdly, it penetrates, analyzes, and reaches truths by no other faculty discoverable.[1]

These functions he names the "Combining or Associative," the "Analytic or Penetrative" and the "Regardant or Contemplative." It is not intended to digress at length here on Ruskin's theory of the imagination. Enough has been said to support the view offered earlier of the character of his thought.

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1. Modern Painters, Vol. II, p. 228.

While wishing to retain the old idealism, and its religious sanction, Ruskin is feeling the pressure not only of his own anti-metaphysical empirical-mindedness, but that of the science of his day. The great contemporary questions concerned with the exact description of form leave their traces in his theory as a not entirely successful attempt to achieve valid criteria for form in art. In this quest, he was not alone. Supporters of the creed of fidelity to nature were many, and both their willingness to accept a degree of idealism and their reverence for science varied considerably.

It was among the Pre-Raphaelites, of course, that the ideal of truth to the detail of natural forms was carried to its furthest extreme. Writing in the Pre-Raphaelite journal, The Germ, in January 1850, John L. Tupper states their fundamental position:

> ...the antique, however successfully it may have wrought, is not our model; for...fine art delights us from being the semblance of what in nature delights. Now, as the artist does not work by the instrumentality of rule and science, but mainly by an instinctive impulse; if he copy the antique, unable as he is to segregate the merely delectable matter, he must needs copy the whole, and thereby multiply models, which the casting-man can do equally well; whereas if he copy nature, with a like inability to distinguish that delectable attribute which allures him to copy her, and under the same necessity of copying the whole, to make sure of this "tenant of nowhere;" we then have the artist, the instructed of nature, fulfilling his natural capacity, while his works we have as manifold yet various as nature's own thoughts for her children.[1]

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1. The Germ: Thoughts Towards Nature in Poetry, Literature and Art, intro. by W. M. Rossetti, London 1901, p. 14.

Here, any sort of technique except that of exact observation is seen as superfluous. If the artist can copy -- imitation in the sense used by Reynolds is unnecessary -- nature will do his job for him. The ability to select and compose are not required. Yet behind this seeming unscientific approach lies a scientific motive, as an article in the next monthly issue by John Seward, "The Purpose and Tendency of Italian Art," shows. He points out that the sciences have become almost exact. The aim of art should, like the aim of the sciences, be the search for truth through ever-widening knowledge. Thus, "Truth in every particular ought to be the aim of the artist." He must "be content to study nature alone, and not dream of elevating any of her works, which are alone worthy of representation."[1] W. M. Rossetti still upholds this position in his article "Animal Design and Landscape: Aspects of Their Contemporary Treatment," in Macmillan's Magazine, June 1863. However, he is more explicit and more idealist as to what constitutes scientific truth -- it is to be the specific, not the individual that is to be represented.

> The medium course, exactly corresponding to the demands of our time, seems to lie in a careful development of zoological character, as distinct from the conventional, on the one hand, and from the merely individual, with its ingenious personality and comparative tenuity of impression, on the other.[2]

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1. Op. cit., p. 61.

2. Op. cit., Vol. VIII, p. 119.

Yet even here, the preference for recording the individual shows through. A scene may be chosen for representation in landscape painting, "not so much because it lends itself to the purposes of pictorial art and composition as because it is actually there in nature." Further, it is suggested, to some extent distorting Ruskin, that

> ...not only the external facts, but also the mental effect, of a natural scene can be best realized by very close adherence to its several constituent parts — the real, direct facts of form and arrangement, of colour, relative tone of objects, and so on.[1]

In opposition to the views of the Pre-Raphaelites, we have the views of John Macvicar. According to his theory, the ideal is the aim of the fine arts. This he defines as "the forms of reason spontaneously picturing themselves in the imagination at the sight of nature."[2] Man, like God, can create the beautiful, but he cannot originate it. He must go to the forms of nature — he must "commit himself to nature; he must seek and find communion with her spirit; and grasping some one or other of her typical forms or conceptions, that and that only must he venture on expressing...."[3] God is the source of the beautiful which is manifested through natural laws and their products. Natural philosophy is then of use to the artist

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1. Ibid., p. 121.
2. The Philosophy of the Beautiful, Edinburgh 1855, p. 130.
3. Ibid., p. 18.

in disclosing "what those forms and lineaments are which the laws of nature tend generally to produce," for these are to provide the principles of beauty in art. To require "the very forms which nature produces in detail, is to undervalue the type and the genus, and to prefer the individual," which Macvicar thinks both unphilosophical and against the evidence of history. The individual leads to "mere portraiture."

An aesthetician whose works received more attention in their time than Macvicar's, and who shows more evidence of influence from the natural sciences is Sir Charles Eastlake. He is, like Macvicar, an idealist, but his interest in the empirical approach to natural form is far greater. That he is well-read in natural science is obvious from his references to Camper, Blumenbach, Cuvier and others. Like Ruskin, he is opposed to excessive imitation, but from pragmatic considerations.

> Could the imitation of living objects, for example, in Painting or Sculpture, be carried to absolute deception as regards their mere surface, we should only be reminded that life and motion were wanting. On the other hand, relative completeness, or that consistency of convention that suggests no want — the test of style — is attainable in the minute as well as in the large view of nature....[1]

However, the imitation of nature may well provide the starting-point for the artist, for it teaches him to see the "relations of harmony" which cannot be had from a simple copy of nature. This leads to the

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1. Contributions to the Literature of the Fine Arts, 2nd ed., London 1870, pp. 11-12.

development of the creative power by which he can produce an imitation of nature, the components of which are related as naturally and harmoniously as they are in the natural world. Unfortunately, this principle is vaguely expressed:

> The dependence of every portion, every atom of nature on what it comes in contact with, is its life, its excellence, its beauty....a work of art which is true to itself in these great principles of nature is more really imitative than a collection of facsimiles of the peculiarities and accidents of nature, which, it will generally be found, have no connection with each other.[1]

As might be expected, the scientific recording of detail is a matter of secondary importance, and, though a knowledge of the details of natural form is an aid to the artist, he must be capable of more than mere imitation:

> The definition of visible characteristics...is accomplished, in a great degree, by the comparative anatomist, the botanist, and other votaries of science: such investigators may consequently render more or less service to the artist. But the paths of the two classes of inquirers soon diverge....[2]

Like Reynolds, Eastlake proposes comparison and selection from nature, but unlike Reynolds, he displays a tendency to speculate on the means by which the type to be represented in art may be arrived at. In his view, comparison not only of members of the same species, but of species with species, is necessary. He cites the example of

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1. Materials for a History of Oil Painting, Vol. II, London 1869, p. 319.

2. Contributions to the Literature of the Fine Arts, p. 361.

Greek art. Greek artists achieved a supernatural beauty in portraying the human form by expunging all traces of man's relationship with inferior animals. This is admitted to be a relatively difficult feat, as there is no empirical evidence of what is needed to complete the comparative process -- there is no creature above man with which he can compare himself. But for the animal world it is obviously much easier to achieve ideal form. Throughout Eastlake's theorising on the achievement of beauty of form, which will be discussed elsewhere, there runs a thread of speculation as to how far the natural sciences can benefit the artist.

Philip Hamerton, in his Thoughts About Art,[1] suggests a compromise between realism and idealism. He, like Ruskin, has gathered from experience that not all subjects are suitable for exact imitation. He therefore suggests painting objects which appear changeful, such as mountains, partly from memory. His approach to landscape in general is basically idealist. Landscape, above all, reflects man's moods. However, he is perfectly aware of the value of observation and hastens to recommend the study of geology and botany — "I cannot imagine a more efficacious help to memory than the clear and accurate knowledge of the characteristics of species."[2]

Hamerton, though he believes that the scientific and

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1. London, 1873, first published 1862.

2. Imagination in Landscape Painting, London 1887, p.13.

artistic imagination have much in common, looks back to the Romantics in his emphasis on feeling. Feeling is inextricably bound up with the artistic imagination — the artist works in a state of "half-feigned" or "half-remembered" emotion — and it is this which distinguishes him from the scientist. Indeed, this imaginative faculty can lead to an art which is almost independent of nature. This, as with Roger Fry, later, is a product of reverie, when

> ...the vision of the world becomes...what Wordsworth aptly called 'eye music,' and...painting is then no longer a study of tangible things at all....Then comes a new exercise of the imagination, which no longer occupies itself with imaginary scenes and things, but only with sequences and relations, — in short, it becomes musically creative.[1]

However, when he is focusing on the mechanics of art, Hamerton is quick to recommend, as suggested above, the scientific approach. In Thoughts About Art, he explains that he associates

> ...artistic progress with scientific, because the art of painting is strictly a compound of two sciences, with a poetic infusion from the mind of the artist. The sciences are, first, the great science of natural aspects, an infinite ocean of discovery which ten thousand discoverers might traverse forever without exhausting; and, secondly, the technical science of colour. These sciences follow precisely the same law of progress as all other sciences....

Artists, whether they choose or not, must be scientific:

> ...they are compelled to become so because they have embraced a profession which includes a natural science, just as the profession of medicine does. What I desire to enforce is the great truth that within the Art of Painting there exists, flourishes, and advances, a noble and glorious SCIENCE — a

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1. Ibid., pp. 72-73.

> science as great as geology, or astronomy, or chemistry — a science, like them, based entirely on nature, and which is essentially and irresistibly progressive.[1]

Hamerton is not prepared to judge whether the scientific will aid or hinder the poetic element in art in the long run, but it is easy to see to which he gives the higher value. As he sees around him "signs of intense scientific activity in contemporary artists; as they ransack all the realms of nature for new facts," he feels "unlimited hope and confidence in the future."

The tension between realism and idealism was felt to the closing decade of the century. In Essays Speculative and Suggestive,[2] J. A. Symonds points out that the two are in fact inseparable. Symonds is interesting as he exemplifies a trend which had been growing during the period just under discussion and which reached its peak towards the close of the century. This was the desire to treat problems of art form from an evolutionary point of view. Symonds states the basis of this method:

> The fundamental conception which underlies the Evolutionary method of thought is that all things in the universe exist in process. No other system has so vigorously enforced the truth that it is impossible to isolate phenomena from their antecedents and their consequents.[3]

In accordance with the aim of presenting the growth of art as

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1. Op. cit., pp. 97-98.
2. London 1893.
3. Op. cit., p. 6.

analogous to an organic development through time, we find the forms of art shown as the result of inevitable, unconscious, even, partly accidental processes. With Symonds, as with Vernon Lee, art forms arise out of pre-existing forms in a progressive cycle similar to that discernible in nature.

> A certain type of literature or art manifests itself, apparently by casual occurrence, in a nation at a given epoch. If favourable conditions for its development are granted, it runs a well-defined course, in which every stage is connected with preceding and succeeding stages by no merely accidental link; and when all the resources of the type have been exhausted, it comes to a natural end, and nothing but débris is left of it. Such types suggest the analogy of organic growth.[1]

This reduces the role of the artist in the creative process to a mere mechanical selection of forms. The form "controls the genius." Vernon Lee remarks on the strength of tradition:

> These traditions, representing the satisfaction of the aesthetic instinct through universal and long practice, are the stuff of every artistic style. The individual artist, however great, merely selects among the forms habitual in his youth and alters them, even as the mechanical inventor or the philosopher alters and develops the appliances or the systems of his predecessors.[2]

The views of Vernon Lee and J. A. Symonds have behind them a long line of anthropological studies of art form, beginning with George Harris's Theory of the Arts, published in 1869. It is unnecessary

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1. Ibid., p. 32.

2. "Anthropomorphic Aesthetics," Quarterly Review, April 1900, repr. in Beauty and Ugliness and Other Studies in Psychological Aesthetics, Vernon Lee and C. Anstruther-Thomson, London 1912, p. 32.

to examine all these in detail as the aim, justification and conclusions are covered adequately by two writers of the 'nineties, A. C. Haddon and Henry Balfour. Haddon states that the scope of his work is "to deal with the arts of design from a biological or natural history point of view." The art of primitive peoples is chosen so as to

> ...confine one's attention to less specialised conditions; the less the complication, the greater the facility for a comprehensive survey.[1]

This, he points out, is in accord with the practices of the natural sciences, especially physiology, where the study of lower animals elucidates problems connected with the more complex higher animals. The conclusions arrived at by this method, which includes observation and experiment, are stated by Balfour as follows. The creation of new forms in art is through minute modifications of existing forms. These, in prehistoric times, were based on crude imitation of nature, and the accidental adaptation of natural materials to the imitation proposed. In the first stage of his progress, man "simply accepted and adapted effects which were accidentally suggested to him." Then arose the desire to reproduce these partly natural effects artificially. In the third stage, which results from successive copying of this kind, attempts at variations which are conscious, as well as unconscious variations

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1. Evolution in Art, as Illustrated by the Life-Histories of Designs, London 1895, p. 2.

take place.[1]

In the work of the evolutionary aestheticians we have the first thorough attempt to approach the problem of form and the creative process from a wholly empirical position. Earlier, attempts were made, as has been seen, to accommodate the new empiricism within the framework of accepted theoretical standpoints. But with the evolutionists, there is for the first time, the admission that the achievement of form in art is a phenomenon whose laws may be explained entirely on a naturalistic basis. The new development hypothesis provides a fresh organic model, this time for use in an objective natural-scientific approach to form in art. On the psychological side, the new biological approach to mentality provided complementary theories to account for the experience of the artist himself. Broadly speaking, in its interest in the relationship of nature to the creation of form in art, the century moved from metaphysical speculation towards adoption of the methods of natural science.

But it is interesting to remark how, in theorising about form and the creative process, the aestheticians of the nineteenth century tended to follow the conservative tradition in the natural sciences. With the exception of the radical views of Wordsworth (even these, as we saw, underwent modification) and Coleridge, the

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1. The Evolution of Decorative Art, London 1893, pp. 21-23.

majority of writers on the question showed themselves conservatives in science. Ruskin's association with the conservative geologist, Buckland, and the school of thought associated with him, and Eastlake's attachment to Cuvierian principles, which will be touched on further in the following chapter, are obvious cases in point. Even the work of the evolutionary aestheticians was based on what was most orthodox in science. Darwinism was well established before any considerable work in aesthetics founded on evolutionism appeared. This marked cautiousness is perhaps due, early in the century, to the character of British natural science itself — its comparative apathy towards continental advances and its clinging to traditional methods and principles. Similarly, later in the century, as has been shown earlier, Darwinian evolutionism had to overcome a considerable conservative opposition, before its universal acceptance in the 'seventies.

Chapter III

FORM AND BEAUTY

As the nineteenth century opens, we find the three elements that were to dominate the aesthetics of formal beauty during the greater part of the century established in the works of the Romantics, Wordsworth and Coleridge. These three supporting beams were the theory of association, the appeal to nature, and the reworking of the various classical theories of formal beauty. The examination of Associationist theories is to be held over until the final chapter on Psychological Approaches to Form. In the present chapter it is proposed mainly to follow the development of the several ultimately classical theories of formal beauty as they were revived and modified to keep pace with the growing tendency to empiricism in the general thought of the century, under the pressure from the natural sciences. Idealist theories of beauty were usually referred to their classical sources, such as Pythagoras and Plato, but were also

held to be based on either scientific observation of nature, including exact measurement, or on the discovery of natural principles of beauty thought to be consonant with the natural laws already disclosed by science. Some aestheticians referred to their work as the "new science of aesthetics" and most were familiar with such relevant scientific thinkers as Petrus Camper, Blumenbach, Cuvier, Oken and many others.

We shall commence with the thought of Wordsworth, since his ideas of beauty, as already partly demonstrated in the previous chapter were dependent on the notion of organic feeling — that is, their basis was ultimately in the science of feelings expressed in Darwin's Zoonomia, rather than in the Associationist psychology. We have already noticed something of his belief in the educative power of natural form which works in the individual through feeling from earliest childhood. In Wordsworth's view, the emotion of love is particularly associated with the perception of beauty. The infant stretches forth its hand to touch a flower which, though he is as yet too feeble to pluck it, has already been "beautified" by love "Drawn from love's purest earthly fount for him," — that is, from the love he feels as part of his bond with nature. This operates at first through the feelings he "Drinks in" from his "Mother's eye," but is then generalised to include all the natural objects within his range of vision. The feeling thus generated is an organic one:

> Along his infant veins are interfused
> The gravitation and the filial bond
> Of nature that connect him with the world.

Earlier it was shown how the forms of nature could work through fear to develop the visionary power in the growing child. Likewise, through the "fearless visitings" of natural beauty, the child's thoughts and feelings are developed and purified. The feelings and thoughts inspired by love for the beauty of nature are inseparably mingled with the creative sensibility of the poet. As well as "the spirit of religious love" in which he "walked with Nature," he had a further faculty, an "auxiliar light" which seemed to have the power of intensifying and ordering natural beauty. It would seem that the creative power of the poet is ultimately dependent on the love he feels for the beauty of nature, especially the forms of nature, as much as on the fear he experiences in the presence of objects of sublimity. He says of the child's experience of the power of love to beautify the flower, that this is "the first/ Poetic spirit of our human life." Wordsworth then is much more complex in his analysis of the feelings aroused by beauty than the Associationist school, on whose ideas his work has been usually considered to be based. The fundamental difference lies in the prominent role he gives to organic feeling, thus referring his aesthetics finally to natural principles.

Coleridge's thought on beauty is perhaps of slighter interest in itself, being fragmentary, but is included for the sake of completeness. His main writings on beauty are the fragments and essays which have been appended by Shawcross to Volume II of the

Biographia Literaria. These are "On the Principles of Genial Criticism," "Fragment of an Essay on Taste," "Fragment of an Essay on Beauty," and "On Poesy or Art." Coleridge, unlike Wordsworth, explicitly rejects Associationism. "Association in philosophy," he writes, "is like the term stimulus in medicine; explaining everything, it explains nothing; and above all, leaves itself unexplained."[1] Instead, he adopts the Pythagorean principle of the unity in multeity as the foundation of his theory of beauty as a direct intuition.

> The sense of beauty subsists in simultaneous intuition of the relation of parts, each to each, and of all to a whole: exciting an immediate and absolute complacency, without intervenence, therefore, of any interest, sensual or intellectual.[2]

Again differing from Wordsworth he tries to divorce the perception of beauty from anything that could be described as organic feeling. Beauty is seen as harmony, and is a species of the agreeable in that it is "naturally consonant with our senses," because these operate in accordance with a harmony already existent between nature and the human mind. It will be remembered that, in the previous chapter, Shakespeare, the greatest of literary artists and therefore exponent of the beautiful, was described as "nature humanized." Elsewhere Coleridge remarks that art is "nature

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1. "On the Principles of Genial Criticism," op. cit., p. 222.

2. Ibid., p. 239.

humanized." He then restricts the beautiful to the objects of sight and hearing alone, as only these are "susceptible of distinction of parts." Thus the "shapely" or the beautiful in form combined with the naturally agreeable produces the response of beauty. But, as might be expected of the confirmed vitalist and organicist disclosed in the last chapter, he realises that the element of life must be accounted for. Since this is not to enter subjectively as organic feeling, the quality of life must be present objectively in the thing of beauty itself. Thus, he introduces the notion of the "balance, the perfect reconciliation, effected between...two conflicting principles of the FREE LIFE, and of the confining FORM,"[1] which he finds exemplified especially in Raphael's "Galatea." This appears to be entirely the result of the artist's spontaneity in composing the forms which make up the picture. The result is the appearance of organicism. The stiff regularity of form is "fused...and almost volatilized," in keeping with the organic metaphor for the operations of the imagination and will described in the previous chapter. Thus while maintaining the organic metaphor, Coleridge keeps his theory of the perception of formal beauty clear of the feelings of the class of "organic accompaniments" that were to become the preoccupation of the aestheticians who followed him, especially his fellow-Pythagorean

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1. Ibid., p. 235.

(if two minds so different may be so described) D. R. Hay.

Hay's work was the first really comprehensive attempt in the nineteenth century to establish a comprehensive aesthetic of the beautiful entirely on natural principles. He believed that the basis of the beautiful was harmony, which he considered another name for unity in multeity, and that an analogy existed between the harmonies perceived by the eye and the ear. That is to say that the harmony of combinations of musical notes was analogous to the harmonies of colour combinations and formal compositions. This he attempted to demonstrate by an ingenious scheme of numerical ratios, which he claimed to be a reconstruction of the supposed theories of Pythagoras. His work was anticipated in part some decade or so earlier by Peter Legh, whose The Music of the Eye: or Essays on the Principles of the Beauty and Perfection of Architecture was published in 1831. Legh based his assumption that architecture and music were analogous arts on the first three chapters of Vitruvius. He pointed out that both were little dependent on imitation, and that not only architecture and painting, but sculpture also, depended for their success to a large extent upon harmonious and appropriate composition, "and as the theory of Architecture is the very soul of that harmony and propriety, it might be styled the music of intelligent composition."[1] However, Legh was almost exclusively interested in

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1. Op. cit., published in London, pp. 40-41.

the practical aspects of architectural design and taste, and consequently, these generalisations are merely incidental to the main matter of his book.

To Hay, however, harmony was the fundamental question and he explored it in a long succession of books in which he reiterated, elaborated, and eventually modified his views considerably. The first of these works was The Natural Principles and Analogy of the Harmony of Form, which appeared in 1842. This was rejected in principle by the reviewer in the Athenaeum, who nevertheless accepted his conclusions. In this book Hay attempted to show that the visual perception of formal beauty was really founded on natural principles, and that the distinctive traits of form which produced the impression of beauty were, in the deepest sense, naturally pleasing to the mind. Furthermore, he wanted to establish the analogy between visual and aural form mentioned before, and that, since, in his view, the sciences and the arts were connected, a system of linear harmony could be founded, similar to that which describes musical form, so as to rationalise in a like manner the structures of plastic formal beauty. Systems of harmony had been established for sound and colour, but not for visual form. Hay's aim was the education of taste, rather than aid for the creative artist. He began by distinguishing three levels at which the mind could be affected by sound. At the first level, the intonation of an orator, almost as much as the meaning of his words, could affect us. Secondly, and

more powerfully, we could be affected by the sound produced by a vocalist. Thirdly, and most powerfully, we could respond to the even more artificial sounds of combined instrumental and vocal music. Analogous to this succession, we could also react to visual forms in three ways. Corresponding to the simple effect of the orator are the simple forms of architecture, which appeal more to the judgement than the senses. At the second level, we have the more affecting works of sculpture, and, analogous to the complex and powerful effect of combined instrumental and vocal music, we have the works of the historical painter which join the expressive forms of the sculptor with colour. It was Hay's opinion that the "primitive parts of form are...analogous to the primitive parts of sound and colour in their number;" and he then proceeded to demonstrate mathematically that they "arise out of one another in the same relative proportional quantities."[1]

The next year saw the appearance of a further book on the same theme, this time entitled Proportion, or the Geometric Principle of Beauty, Analysed. It was essentially a reworking of his earlier material with some elaboration and the mention of a new support for his scheme. Here and in a later book, he claims to have taken a hint for his idea of universal harmony from an article which appeared in the British Medical Review, No. XXXV, p. 71, which

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1. Op. cit., published in Edinburgh, p. 18.

stresses that there is a deep harmony of natural laws prevailing in the universe. This apparently suggested to him his system of aesthetic correspondences. In Proportion, Hay, like Legh earlier, distinguishes between the two pleasures afforded the eye by beauty of form: that which arises from imitation, and that which is the result of composition, and thus, in Hay's view, of scientific combination of pleasing forms -- "of similarity and dissimilarity, and various modes of simplicity and variety." Imitative beauty alone will never make a great work of art, he thinks, but formal beauty which is the result of scientific composition may well do so. The effects of the two different qualities of form on the mind are very different. Imitation produces mere deception, whereas "scientific composition of form seems to be appreciated by an inherent feeling responsive to certain mathematical principles of propriety and harmony existing in nature, and conveying an impression to the mind through the medium of the senses...."[1] Beauty depends on calculation and geometry, because it is only thus that proportion, or the essence of symmetry, "the first principle of harmony to the eye" can be achieved.

May then points to the analogy between the arts. Proportion in the plastic arts is what time is in music, measure in poetry, but "in its more complex mode it is to form what grammar is to language, or harmony to music." Next he shows how the various

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1. Op. cit., London 1843, p. vi.

figures are related to the organ of sight, the eye, and, with the aid of diagrams shows how the shape of the figure is related to the sweep of the eye, and thus demonstrates that different figures, requiring different amounts and types of work from the eye produce different, and more, or less, pleasing effects. This is the first of his natural principles of formal beauty in this new presentation of his aesthetic.

> The effects of geometrical configuration on the eye are, in the first instance, regulated by the relation they bear to the conformation of that organ itself; hence the soft influence of those of the curved kind, and the acute and more powerful effect of those whose outlines are composed of angles. On the mode of proportioning these elements of form in the combinations of various figures, their effect upon the eye depends — when a proper mode is adopted, geometric beauty is the result, while the adoption of an improper mode results in deformity.[1]

Following this, Hay establishes the numerical basis of his theory. The term proportion implies more than one part, and therefore is possible only by the combination of two or more parts. However, there is also an upper limit to the number of parts, which Hay sets at three. The first number, two, implies the relation of length to breadth, and the second, three, "is the relative quantity of the three kinds of configuration that are produced by the straight, the angled, and the curved line; the various combinations of which elements lead to infinite variety." This is the second of his natural principles of formal beauty.

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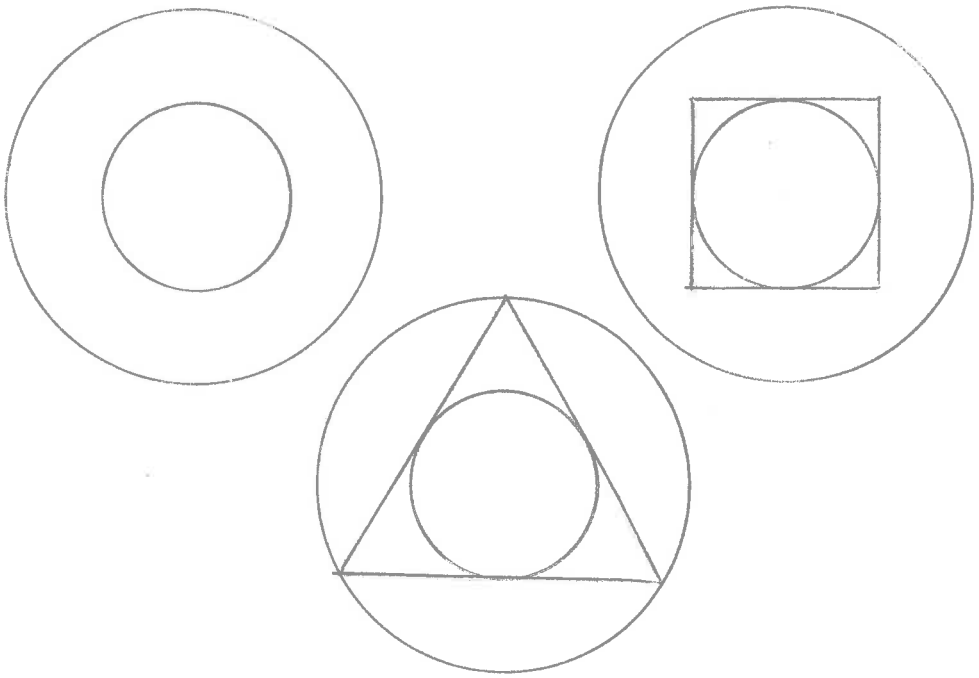
1. Ibid., p. 9.

> Those dimensions must relate to one another agreeably to mathematical laws, which are responded to by an inherent principle in the human mind, correlative to them and regulating every effect of external nature upon our senses. This may be called the first principle of taste in regard to figure, and is possessed by mankind in every phase of variety, and when it develops itself in any high degree, it constitutes genius.[1]

Hay's psychology is less illuminating than his physiology, but it is in keeping with the "faculty" psychology which was still current at this time. His next step, to complete the final part of his theory, is the analysis of formal beauty into three primary forms analogous to the colours red, blue, and yellow, and the tonic, mediant, and dominant notes of the diatonic scale in music. These figures are the circle, the triangle, and the square, which are related as in the figures below.



1. Ibid., p. 10.

The circle is considered not only geometrically the simplest of the forms, but because the pupil of the eye is circular, the most easily perceived. It is therefore also naturally the simplest form. The square is next most consonant to the eye, because its angles are less acute than those of the triangle, whose oblique lines and acute angles exercise the most powerful influence on the eye.

In his next book First Principles of Symmetrical Beauty,[1] Hay carries on his theory to include a like analysis of symmetry. This was warmly welcomed by the reviewer in the Athenaeum as a "grammar of form." Hay finds that there are three main kinds of symmetry relating to the numbers two, three, and five, which he associates with the square, the equilateral triangle, and the isosceles triangle respectively.

With his next book, On the Science of Those Proportions by Which the Human Head and Countenance as Represented in Works of Ancient Greek Art are Distinguished from Those of Ordinary Nature,[2] Hay gives further and direct evidence of the influence of the tendency in natural science to exact measurement on his aesthetics of form. He shows himself acquainted with the measurements made by such precise anthropological investigators as Camper, Blumenbach, Sir Charles Bell, Oken, and Owen. He disagrees with Oken, Camper, and Bell as

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1. Edinburgh 1846.

2. Edinburgh 1849.

to the relevance of the facial angle to the determining of ideal beauty in the Greek heads, and sets out, after discussing Owen's and Blumenbach's work, to determine the proportions anew with the aid of copious diagrammatic illustration.

In the subsequent work, The Geometric Beauty of the Human Figure,[1] he introduces a modification of his former views. Previously, his standard of comparison had been provided by linear length; now he was to adopt angular proportion. He stuck, however, to his musical analogy:

> The basis of his present theory, therefore, simply is, that a figure is pleasing to the eye in the same degree as its fundamental angles bear to each other the same proportions that the vibrations bear to one another in the common chord of music.[2]

Hay believed that the proportions of every plane figure could be determined by reference to one angle and that the "universal aesthetic principle" of numerical ratio could be applied through this one elementary angle, that is, every angle of the figure had to be a multiple by 2, 3, 5, or 7, of the fundamental angle.

Hay's most comprehensive work, The Science of Beauty as Developed in Nature and Applied in Art, appeared in 1856. In this book, he stresses that his investigations are neither physical nor metaphysical, but occupy a middle ground between the two. Yet he

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1. The Geometric Beauty of the Human Figure Defined, to Which is Prefixed a System of Aesthetic Proportion Applicable to Architecture and the Other Formative Arts, Edinburgh 1851.

2. Op. cit., p. xiv.

calls his work "aesthetic science" — a significant reversal of his earlier compromise when the contemporary valuations of science and metaphysics are recalled. He insists that modern science has shown his Pythagorean system to be "natural," not mystical, as was formerly thought. Furthermore, he can now cite empirical evidence to support his geometrically achieved conclusions. F. C. Penrose had been sent by the "Society of Dilettanti" to take measurements of the Parthenon. It so happened that the measurements taken by Penrose corresponded with those arrived at by Hay who had worked them out using his theory that a harmonic division of right angles had been used to achieve the beautiful proportions of the Parthenon. Hay, while still aiming at deciding ideal beauty, was attempting to do this by means that were scientifically acceptable. The old vague appeal to general nature, and to harmony and proportion, he felt, would no longer serve in the face of the increasing exactness of the natural sciences. Thus he appeals to natural principles, and the empirical evidence of exact measurements as sanctions for his system, rather than to the prestige of tradition, though obviously he accepts this in his selection of ancient Greek art as the material for his researches.

Hay's methods were by no means eccentric when we consider the prestige enjoyed by the work of Fechner on the "golden section." Even in our own century, Birkhoff's Aesthetic Measure shows that the impulse to fix the elusive principles of formal beauty by mathematical means has not entirely died. In spite of the guarded attitude

of reviewers to his work, Hay had his followers. The most notable among these was J. A. Symonds the elder, the physician father of the J. A. Symonds mentioned in the previous chapter. In his Miscellanies,[1] is included an essay entitled "The Principles of Beauty," which was originally an address that he delivered as president of the Conynge Society for the Restoration of St Mary's, Redcliff, in 1856. A large portion of this was devoted to the exposition of Hay's theory of the correspondence between the harmonic ratios of sound and the geometrical proportions which determine beauty. In addition, he considers beauty in relation to sensation, thought or reflection, moral sentiments, and associated emotions. He concludes, like Hay, that the pleasurable sensations we experience in the presence of beautiful objects or sounds are due to muscular activity in the organs of sense. Although his address was given thirteen years after the publication of Hay's treatise, he claims to have arrived at these conclusions independently of Hay, whose views he corroborates.

> ...if the spaces over which the eyes are carried have definite proportions to each other, it follows that the movements of the eyes will bear like proportions. Such proportioned movements, then, are rhythmical, and may be capable of infinite variety; that is, they may be as extensive as the variety of harmonious forms; and, in all that regulated harmonious variety, they may afford exquisite feelings of pleasure.[2]

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1. Selected and edited with an introduction by his son, London 1871.

2. Op. cit., p. 24.

These feelings of pleasure are due to the principles of similarity, continuity and variety in the objects perceived. For his illustration and elaboration of these principles Symonds confines himself to the discussion of form, disclaiming sufficient knowledge of colour. There seems very little that is original in Symonds's work. He relies on Dugald Stewart for his discussion of associated emotions, and leans towards the imagination as the source of ideal beauty, basing his ideas on Reynolds's.

A far more thorough and original attempt than Symonds's to place the aesthetics of formal beauty on an equal footing with the natural sciences was that of Macvicar, whom we met in the last chapter. He is convinced that science is capable of revealing an unexpected wealth of beauty in nature.

> In proportion as science extends our comprehension of nature, her beauties multiply upon us; and if science were competent to embrace the whole economy of nature, doubtless we should find all nature, when viewed as a whole, to be truly beautiful. Nor this only. Every object in particular, when regarded as in its own place, in the grand panorama of universal nature as its frame or setting, we should find to be a perfect picture or gem — just what it ought to be for the place where it is hung up or set in — and not better calculated to satisfy the reason by the account which it has to give of its production, the conditions of its existence, and the ends which it serves, than to please the taste by the forms and colours which it presents to the senses. This is beautifully verified by the eye of the man of science, when compared with that of the uneducated observer. There are thousands of species in all three kingdoms of nature, which to the vulgar eye seem worthy of no notice, either for their beauty or for anything else, while yet to the naturalist they are invested, every one of them, with a thousand charms.[1]

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1. Op. cit., pp. 2-3.

Like the Romantics, and Ruskin, Macvicar believes that every form in nature is expressive of something in the world of spirit -- of moral qualities in particular. As was stated in the previous chapter, God is the fountain of all beautiful creation and beauty is manifested in the working of his natural laws and in their products. Macvicar reasons then that since nature is dynamic there must be two kinds of formal beauty about which natural science can inform us. Firstly, there are "those forms and lineaments which are under change, and tending or pressing towards those which are their end and aim," and, secondly, there are those which the former tend towards, "the resultant, the statical conditions of the same material." For example, of a plant, the branches and stems are "dynamical" because they tend towards the achievement of the proper end of the plant, the production of the fruit, which is "statical." From this we can see throughout nature and art two kinds of beauty: on the one hand, the animated and expressive, and, on the other, that which is simple and "speaks of stability." Simple beauty is dead beauty, and does not interest us to the degree that expressive beauty does. Some examples of it are crystals, fruits, tessalated and mosaic work, lattice, lacework, ornamental design in architecture, and the patterns of the kaleidoscope. From this last, Macvicar adopts an alternative name for this type of beauty -- "kaleidoscopic." Examples of the other type, expressive beauty, are, according to his fancy, the ruggedness of nature, ruins, cliffs, ravines, rivers, aged trees, mountain

scenery, clouds in a storm, the human figure, greyhounds, horses, vases, the ogee, and scrolls. In Macvicar's view, nature is always working towards symmetry as its point of rest. The most symmetrical shape being the sphere, it is this that dynamic nature is working towards, thus producing expressive beauty. This notion is based, he tells us, on the geology of Lyell; (later, he refers us also to Phillips's Mineralogy, in discussing the natural observations which support his morphology.)

> The laws of nature, as operating in the dry land in fact, however badly they may be succeeding in consequence of local irregularities in the action of the force that upheaves the mountains, and in the resistance of different kinds of strata to the action of air and water, yet have it always as their aim to reduce all to a portion of a sphere, which is the ultimate and statical form of a gravitating mass like the earth.[1]

There are consequences to beauty from our awareness of the action of the forces of nature on the environment. If certain features in objects bring to mind the idea of succession in time, these will characterise the object as showing expressive beauty. If features of the object present themselves primarily as occupying space, then the object will exhibit the beauty of repose — simple beauty. Simple beauty is entirely comprehended by the term symmetry — and this is considered not to differ from unity in variety. However, Macvicar later qualifies this by allowing that expressive beauty as well as simple beauty may attach to the forms of objects in their

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1. Ibid., p. 29.

aspect as occupying space, but only in the case of defects in symmetry.

Like Hay, Macvicar proposes a geometrical system of analysis for determining the beauty of forms. He also hopes to analyse the expressiveness of forms. The basis of his scheme is the use of the triangle as a standard of comparison, and this must, paradoxically, be both perfectly symmetrical and defective in symmetry, if it is to do service for analysing both simple and expressive beauty. His triangle is thus to be the right-angled triangle whose angles are in the ratio 1 : 2 : 3, whose longest side is double the length of the shortest, and the square of whose third side is three times the length of the shortest side. He considers Plato's right-angled isosceles triangle might also be useful. Macvicar finds the greatest beauty in the square, in certain rectangles, and in the lozenge. The lozenge appeals chiefly to the eye, the square to the understanding. The lozenge he notices is most conspicuously ubiquitous (thanks to the benevolence of God) in nature, examples being the reticulation of the human epidermis, of ripples in water, and the shapes of birds and butterflies.

In fact, Macvicar shows a close acquaintanceship with form in nature, and much of his aesthetic is based on analytic observations like these, and by reference of them to semi-scientific natural laws like the following. In his view, nature

functions through the operation of currents, and these produce lines in nature. We need time to contemplate these lines, that is, they cannot be fully viewed instantaneously, but only in succession. In this way, lines become naturally associated in our minds with the idea of motion, "and therefore of a moving cause, and therefore of force, and therefore ultimately of thought, feeling and volition, which is the type and the origin of all force." It is in this way that the lineaments of nature become symbolic or expressive of thoughts or feelings, as remarked earlier. In other words they are the principal elements of expressive beauty.

To return to the geometrical analysis of forms, after this slight digression, Macvicar believes that the kinds of lines seen in nature are neither very numerous nor very varied. He believes that the scientific analyst always finds his constructions leading to the same or analogous lines, and that these are the simplest and most outstanding lines of expressive beauty. For example, in astronomy and optics, we are constantly aware of ellipses, hyperbolas, parabolas, circles, tangents and axes, that is, those lines presented by the cone and its sections. The cone, in fact is the primary shape of nature,

> ...the cone being the form of a pencil of light, "the first-born of heaven," and the element of every radiant influence, is, as it were, the very <u>first form</u> of nature, while at the same time, when its base is dilated, and made to return upon itself, so as to be complete all round, the cone becomes the

> sphere, which is...the last form, the end and aim of nature with regard to form.[1]

Macvicar then compares the expressiveness of hyperbolas, parabolas, straight lines and so on, making these, like the earlier figures, the "first elements" or the key to his "morphology," or "science of forms," as he calls his aesthetic of formal beauty.

The "science of forms," he claims, "may justly be regarded as the science of sciences." In this we see the reflection of the pre-eminence of interest in formal studies in the natural sciences of the period. Macvicar bases his aesthetic, as was remarked, on the scientific observation of nature, and on the discovery of what he thinks are natural laws. Like Hay, he thinks that the exact measurements of the anthropologists may eventually decide what is the standard of beauty in the human head and countenance, but thinks that this will take centuries, and the work of many Cuviers, Owens, Okens, and Caruses.

Three years after the publication of Macvicar's Philosophy of the Beautiful, there appeared another attempt at an aesthetic of the beautiful based on the observation of nature. This was John Stuart Blackie's On Beauty.[2] Like Hay, Blackie looked back to the ancients for a hint on which to develop his natural aesthetic and

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1. Ibid., pp. 93-94.

2. On Beauty. Three Discourses Delivered in the University of Edinburgh, with an Exposition of the Doctrine of the Beautiful According to Plato, Edinburgh 1858.

found it, as Hay had done, in a principle of order. This he saw to be a principle of nature as well as of art. In art there were two distinct varieties of order, that of spatial order, which he identified as symmetry, and that of order in time, called measure or rhythm. That order was the great underlying principle of nature, also, he established by reference to precise natural observation.

> I break a lump of confused and inorganic rock, and within the purple hollow I behold a bright array of well-bevelled, cunningly-edged crystals, which, when minutely examined by a scientific instrument, present forms of as accurate delineation as ever were projected from the postulates of a mathematician. Do you find nothing here, in this lowest platform of organized existence, that can lay a sure foundation for your aesthetical philosophy? I do. The nice order or symmetry of those lucid cubes or prisms, I call BEAUTY; and the all-plastic mind that can alone produce that order, and is everywhere producing it, within and around us, I call GOD.[1]

To Blackie, as to Hay, there exist certain original laws of harmony which are inherent in the universe. Art is then produced by conforming oneself to the natural harmonies that exist in nature. This is to be done by "the free use of intellectual emotion." Because the human mind is naturally attuned to the cosmical mind, nature becomes expressive to us of certain feelings and ideas, and these in turn form the material of art. But the intellectual element is stressed as being of especial importance. The botanist, for example, appreciates the beauty of nature far more than the layman because his mind is directed to the perception of order, and he therefore receives a far clearer perception of beauty than the

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1. Op. cit., p. 12.

layman, who is aware only of confused impressions of beauty. Blackie, like his colleagues, attempts a classification of the beauties of various lines, concluding as usual, that curved lines are the most pleasing. This, to him, is obviously the consequence of a benevolent creation in which there exists a hierarchy of beauty. The higher the organisation, the more beautiful the natural object.

> That rounded forms are the result of a more rich interaction of well-balanced forces, will be evident further from the familiar fact, that curved lines increase everywhere in creation, just in proportion as organisation is made more complete, and forces more complex.[1]

Unlike Macvicar, Blackie is perfectly decided that beauty is inseparable from expression, and, expounding Plato, finds expressiveness even in the various geometrical figures. On the whole, Blackie's work represents one more attempt, at a much shallower level than that of Hay, to modernise the classical aesthetics of formal beauty by the infusion of natural principles and the appeal to scientific observation.

One of the final appreciable attempts along these lines was that of J. B. Mozley, whose Sermons Preached Before the University of Oxford and on Various Occasions[2] were published in 1877. Mozley's epistemology, like his aesthetic, is couched in terms

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1. Ibid., p. 138.

2. Op. cit.

which suggest the natural scientific. According to his view, expressed with some disregard for logic, all knowledge is conveyed to us by the "fact of Form manifesting," and the human mind is constituted by nature for the enjoyment of beautiful form. The manifestation of form he puts down to the operation of vital forces in nature. Mozley takes care to be well up with the latest trend in science and philosophy by showing himself something of an Hegelian evolutionist. He sees spiritual forces manifesting themselves through human life which, in its highest aspects, is "characterised by the dynamics of the human spirit, and the evolution of the human race." These last, in fact, constitute the form of the human spirit — that by which it is known. It is much the same with nature, he thinks. The vital forces of nature manifest themselves in the outward formal beauty of natural objects. Behind all these, exists, of course, a benevolent creator. Mozley says that nature is the archetype of art, but then, reversing this, he describes nature as analogous to art.

> In the creations of the brush or chisel we discern the operation of muscular force guided by Intelligence and Will; and in exactly the same way we may perceive in the phenomena of the world around us an agency which has become fixed, as it were, in a permanent shape and form.[1]

This is what, for Mozley, constitutes the beautiful. But he does not confine the beautiful to that which is connected with vital

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1. Op. cit., p. 5.

force; inorganic nature is capable of great beauty also. As to art, once again, Mozley returns to his principle of form manifesting, and by this, he implies the expressive. Form, for this end, he holds to be the exclusive subject-matter of art. Unlike some earlier aestheticians, however, he does not consider science as of value to the artist. Nothing, in his view, could be further divergent than the pursuits of natural science and art, the one having as its object knowledge, the other, "the power to express." It is obvious that to Mozley, form in art is everything -- he points to the derivation of the word form from the Latin forma, meaning beauty. In his emphasis on the all-sufficiency of form, Mozley's work both reflects what had been the organizing principle of the natural sciences earlier in the century, and looks forward to Roger Fry, whose almost total devotion of interest to the formal elements of art can perhaps be seen as partly the product of a trend of thought beginning in the natural sciences of morphology and comparative anatomy.

Among the group of writers who confined themselves more to the exact observation of nature as a means of modernising classical idealism were Sir Charles Bell, Ruskin, and Sir Charles Eastlake. These were all concerned with determining the ideal of the species by means of natural observations carried out with varying degrees of scientific precision. Apart from this particular pragmatic tendency, they could be grouped with Opie, Fuseli, and

Haydon, the other successors to Reynolds mentioned in the preceding chapter, (with the possible exception of Sir Charles Bell, to whose more extreme views Haydon was explicitly opposed) as their line of enquiry is the same. To Haydon, the Elgin Marbles, which had appeared after the publication of Bell's work, The Anatomy and Philosophy of Expression, in 1806, had rendered superfluous the attempt to approach the ideal form from the direction of anatomical study. The Elgin Marbles represented to him both the accurate imitation of nature and the ideal beauty required by Reynolds. It might, in fact, be truer to say that enquiry about the ideal of the species began with Bell, Ruskin, and Eastlake, for Reynolds and his school of practising Academy artists were more in the nature of compilers and preservers of a tradition that had suffered a few accretions according to fashion, but few challenges. As remarked before, Reynolds's followers, Opie, Fuseli, and Haydon, succeeded in adding little to his thought, although, indeed, in the theories of Opie, begins the appearance of a rather disproportionate desire to advocate a greater degree of empiricism in the artist's attempts to achieve the ideal of the species. This slight confusion of aim, as has been demonstrated of Ruskin, was symptomatic to some degree also of the work of Eastlake, in whose writing appears a considerable preoccupation with precise empirical methods of determining the ideal in formal beauty. But the greatest empirical innovator was Bell, whose views met with

some opposition. Though his work was controversial, it was influential[1] and went through a number of revisions and editions, and it is most distinctly through his methods that we can see the beginning of the trend towards modifying the aesthetics of formal beauty to conform with the increasing exactness of the natural sciences.

Bell took as his point of departure the findings of men working in one of the newest of the natural sciences, anthropology. His aim was, of course, the promotion of the grand style depicting ideal beauty as expounded by Reynolds. This was to be done especially by the accurate portrayal of the thoughts and passions materially expressed by muscular modifications of the human countenance and body. The accurate imitation of these would be considerably aided by a thorough acquaintance with the anatomical components which produced the various expressions such as anger, fear, joy, and so on. In short, Bell was to assist the painter to catch "the effects produced upon the body by the operations of the mind," and to do so by improving his ability to imitate. Success in art, it was stressed, was due, in the main, to original genius. But apart from the improvement of imitation, Bell wished to establish a new method for accurate definition of the beautiful in the form of the human countenance. His system, as stated before, was based on the

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1. For instance, the Eclectic Review, a very conservative publication, recorded a favourable impression. Vol. III, Jan. 1807, p. 52.

new science of anthropology, and he is conscious of his pioneering role, as these remarks indicate:

> I am not without hope that a new impulse may be given to the cultivation of the fine arts, by explaining their relation to the natural history of man and animals; and by showing how a knowledge of outward form, and the accuracy of drawing which is a consequence of it, are related to the interior structure and functions.[1]

Bell came to the task well prepared, having absorbed the relevant works of John Hunter, Camper, Blumenbach and Cuvier. All these had measured the proportions of the face against those of the head to decide the standard of beauty. Bell's own method was to constitute a departure from this established approach. The details of his system are unimportant to the present discussion, but the end in view was the attainment, by the scientific study of nature rather than of art, of the ideal of Reynolds, (though Bell quotes Cicognara as his source): "the imitation of an object as it ought to be in perfect nature, divested of the errors or distortions which secondary causes produce."[2]

The next major aesthetician, in chronological order, to attempt a reconciliation of this kind of idealism with exact observation was Ruskin. His attempt is exceedingly slight compared with Bell's. We have already seen that he was not entirely successful in producing a consistent theory of what was worthy to be the

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1. Op. cit., 6th ed., London 1872, p. 2.

2. Ibid., p. 202.

material of art, as representing the beau ideal. In Volume I of Modern Painters, as we have seen previously, he defines for us his conception of beauty, displaying his characteristic distaste for metaphysics:

> Any material object which can give us pleasure in the simple contemplation of its outward qualities without any direct and definite exertion of the intellect, I call in some way, or in some degree, beautiful. Why we receive pleasure from some forms and colours, and not from others, is no more to be asked or answered than why we like sugar and dislike wormwood. The utmost subtlety of investigation will only lead us to ultimate instincts and principles of human nature, for which no farther reason can be given than the simple will of the Deity that we should be so created.[1]

Ruskin later qualifies this slightly, admitting that intellectual, being unavoidably mingled with moral elements enter into our perception of the beautiful, — the experience of the beautiful being essentially a moral one — but insisting that this is not immediately so; it is impossible to state why or how an object affects us as beautiful. These considerations are the proper province of what Ruskin calls ideas of relation, rather than ideas of beauty. Ideas of relation include in their scope

> ...everything productive of expression, sentiment, and character, whether in figures or landscapes..., everything relating to the conception of the subject and to the congruity and relation of its parts; not as they enhance each other's beauty by known and constant laws of composition, but as they give each other expression and meaning, by particular application, requiring distinct thought to discover or to enjoy....[2]

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1. Op. cit., p. 109.

2. Ibid., p. 112.

These distinctions of the elements which appeal to us in the objects of art and nature by correlation with discrete responses of the psyche are no doubt the reflection of the "faculty" psychology to which Ruskin is indebted also for his analysis of the imagination, as noted in the preceding chapter.

In explaining Ruskin's theory of formal beauty further, it is necessary to refer again to the "theoretic faculty" mentioned in Chapter One. It will be remembered that the term was coined to define the sort of pleasure derived from the contemplation of the beautiful — it was to be neither intellectual nor consisting in "mere sensual perception of the outward qualities and necessary effects of bodies," the latter being covered by the term "aesthesis." This suggests the reason why Ruskin's theory of beauty, as a whole, is freer of the confusion between the ideal and the real which affects his theory of imitation, considered in isolation from it. In exploring the beautiful, apart from his discussion of the ideal type of the species, he avoids the pragmatism that impairs the clarity of some of his thought. The idea of the theoretic faculty is founded on the religious notion that the perception of beauty is accompanied by a feeling of affection towards the beautiful object and a consciousness of God's benevolence in so constituting things that the beautiful unfailingly gratifies certain cravings inherent in our nature. Out of this situation, in turn, arise joy, admiration, and gratitude. The basis of Ruskin's aesthetic of

beauty, then, is primarily religious-psychological, rather than empirically scientific.

This is not, of course, to suggest that Ruskin is comparatively uninterested in the material details of beauty. As has been mentioned previously, in Chapter One, he posits two distinct kinds of beauty which are fully worked out by reference to material phenomena. These are, we recall, Typical Beauty and Vital Beauty. The definition of Typical Beauty is of especial interest in discussing his theory of formal beauty — it is the external quality of natural objects which is, at the same time, "absolutely identical," that is, the ideal of its kind, and typical of divine attributes. Since, as we have seen, an element of empiricism has entered Ruskin's theory of the ideal of the species, the fundamentally Lockean-Platonic confusion noted by Ladd is here most apparent. The term form, used of a beautiful object, must do service to indicate both a purely material object affecting our senses as a perfect example of its kind, and the immaterial medium of a Platonic idea. Ruskin elsewhere points out a common confusion in the use of the term ideal, but evidently fails to notice his own confusion of idealisms.

Like his contemporaries, Ruskin is interested in the various affective properties of lines and, generally, in effects of form on the observer, and attributes the greatest beauty to forms composed exclusively of curves. He notices that curved lines

predominate in nature and, in accord with the benevolence of the divine creator, these are naturally pleasing to the eye. His discussion of unity in variety, though it is based on a religious notion, is likewise illustrated by reference to the benevolent intentions of God as manifested in the forms of natural objects. Apparent Proportion is one means of achieving unity in variety, and it is a fundamental of beauty. It appeals to the eye alone, unlike its intellectual counterpart, Constructive Proportion, which appeals to the sense of fitness of proportion of the object for the ends it serves. Constructive Proportion is thus never a source of the beautiful. In Macvicar's view, nature is ever tending towards the spherical, but to support his theory of Apparent Proportion, Ruskin takes the opposite position:

> The universal forces of nature, and the individual energies of the matter submitted to them, are so appointed and balanced, that they are continually bringing out curves... in all visible forms, and that circular lines become nearly impossible under any circumstances.

He uses his geological observations to substantiate this principle, which he finds operating throughout the three kingdoms of nature.

> The acceleration, for instance, of velocity, in streams that descend from hill-sides, gradually increases their power of erosion, and in the same degree the rate of curvature in the descent of the slope, until at a certain degree of steepness this descent meets, and is concealed by, the straight line of the detritus. The junction of this right line with the plain is again modified by the farther bounding of the larger blocks, and by the successively diminishing scale of landslips caused by the erosion at the bottom. So that the whole contour of the hill is of one curvature....This type of form...is...in its general formula applicable to all. So the curves of all

> things in motion, and of all organic forms, most rude and simple in the shell spirals, and most complicated in the muscular lines of the higher animals.[1]

In the curves produced by this balance of forces, Ruskin sees the "influence of Apparent Proportion," the production of which appears to be the "end of operation to many of the forces of nature." In other words, this fundamental element in our perception of the beauty of form is traceable to natural principles. Symmetry he sees as "reciprocal balance" of the opposing sides of an object. Both unity and symmetry, and indeed, all the marks of Typical Beauty, he holds to be symbolic of divine attributes — unity, of divine comprehensiveness, symmetry, of divine justice, and so on.

It was suggested in the first chapter, that the notion of the beauty of creation as evidencing God's will working through nature was popular. An article by the poet, William Barnes, "Thoughts on Beauty and Art," published in 1861, puts the belief in one of its most usual forms.

> ...the beauty of a species is the full revelation of God's forming will — as, in an ash-tree, is shown in the forming of one stem, with limbs, boughs and twigs, of still lessening sizes, and of such forms and angles of growth as to the eyes of a draughtsman are marks of its species.[2]

In the beginning, God created all perfect, but since this has been spoiled by accident or evil, we must follow in art what can be

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1. Modern Painters, Vol. II, pp. 106-107.
2. Macmillan's Magazine, Vol. IV, June, 1861, p. 127.

readily identified as Reynolds's method to arrive at the beau ideal -- and so, "the beautiful in art is the result of an unmistaken working of man in accordance with the beautiful in nature." Barnes is a figure of small importance among the aestheticians of his day, being for the most part a mere compiler. He follows Hay in his theory of the harmonies of sound, colour, and form. And he almost parallels some of the less felicitous aspects of Ruskin's thought on the benevolence of creation, particularly that concerning the justification of mountains, in asserting that the natural principle behind our dislike of flat ground in landscape is that we are aware that, if all ground were flat, the earth would be overspread with water, and therefore, unfit for human habitation. Barnes's work is noticed here not as being of itself of any intrinsic value, but as an interesting sidelight on Ruskin's, and as illustrating the tendencies of aesthetic thought of the time — its respect for tradition giving way to a willing eclecticism, and a quest, sometimes naively pursued, for natural principles in aesthetics. Barnes's article shows what the tendencies of the age could lead to under the direction of a mind of far shallower penetration than Ruskin's.

A figure of far greater interest is Sir Charles Eastlake. He is interested primarily in exact observation of nature, as noticed in Chapter Two, but in defining the beautiful, he is careful to base his theories on natural principles. Unlike Darwin, he

is convinced that the beautiful appearances of nature serve no useful end. But he recognises two distinct kinds of beauty. The first, absolute beauty, is characterised by its entire uselessness — "where no utility is found to exist, save that of conveying rational delight and of exalting the mind by ideas of perfection." The second, relative beauty, or the "characteristic quality," on the other hand, depends upon the fitness to a useful end of the elements of beauty. He presents us with three criteria of formal beauty which he believes to be founded on natural principles. In the first place, beauty of form depends on character, and "those examples are most beautiful in which the independence and completeness of character are most appreciable." The "observation of nature teaches" that the characteristic qualities of an object are those which fit it for its end. Beauty, he stresses, is the correlative rather than the result of fitness as had been agreed by earlier thinkers like Camper. He shows that he is precisely aware of the current position of natural science on this head by the following observation:

> ...it cannot be at present affirmed that this correspondence is universally apparent, even to scientific observers; but the increasing knowledge of nature is constantly opening up new facts, by means of which zoologists are enabled, more and more, to trace the connection between the most apparently useless organs and the wants of the creature to which they belong.[1]

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1. Contributions to the Literature of the Fine Arts, op. cit., p. 371.

Character he later redefines as "the conformity of the creature to its archetypal or normal structure." A second and higher requisite of beauty is the element of life. Form is the strongest medium through which life manifests itself, especially in the case of the "variously undulating curve," which may be "proposed as a visible type of life: such a form is constantly found in nature as the indication and concomitant of life itself."[1] The final criterion applies only to human beauty, which is "most complete, when it not only conforms to the archetypal standard of its species, when it not only exhibits in greatest perfection the attributes of life, but when it most bears the impress of MIND, controlling and spiritualising both."[2] Thus Eastlake establishes a hierarchy in his criteria of beauty. "CHARACTER IS RELATIVE BEAUTY: LIFE IS THE HIGHEST CHARACTER: MIND IS THE HIGHEST LIFE."[3]

The essentials of Eastlake's theory of comparison of species has already been recorded in the previous chapter. It is interesting to note, however, that, despite his obvious affinities with Reynolds, he rejects explicitly, in a note, Reynolds's confining of comparison to members of the same species. In discussing the characteristic, Eastlake points out an inconsistency in Reynolds's

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1. Ibid., p. 375.
2. Ibid., p. 390.
3. Ibid., p. 393.

view. While it may seem, initially, appropriate for the rest of creation, it is obviously inadequate to distinguish the ideal in human beauty. He considers that "according to his [Reynolds's] theory, the average of defects would be excellence." In fact, he finds it generally inadequate. Eastlake would prefer to fix the essentials of the type by reference to a criterion "beyond the minor varieties." Hence his hierarchical order of beauty above. The varieties then fall into order and their highest type is thus readily definable. As an example, a horse is to be compared with all quadrupeds, so that we may arrive at his characteristic features. We will find

> that he wants, in a greater degree than any other, the power of tearing with his extremities; that his means of defence are in his heels, and that, in order to direct them, his eye is prominent sideways.[1]

The influence of natural science in the definition of these characteristics is most apparent. Throughout Eastlake's work we can glimpse here and there, at a distance, the fundamental ideas of Cuvier, whose theory of animal form was based on the notion of the adaptation of forms to ends, rather than those of the opposing archetypal school of Geoffrey Saint-Hilaire, which was closely allied with the German Naturphilosophie. Eastlake was thoroughly familiar with Cuvier's theories, and his system of beauty criteria shows he understood the rationale on which Cuvier's perspective on

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1. Ibid., pp. 368-69.

nature was founded. But, unfortunately, he sacrificed consistency to this one principle by clinging to the traditional notion of absolute beauty.

The position then, until the establishment of Darwinian evolutionism, was that the old classical theories were being constantly revamped by infusions of new principles based on natural observation, but without any really far-reaching attempt to examine and correlate the scientific principles of form underlying the appearances of nature with formal beauty in art, or even in the objects of nature, as aesthetically perceived. The work of Eastlake, indeed, shows an appreciation for the need to take cognizance of the fundamentals underlying formal theory in the natural sciences, but he appears unable to elaborate on the basis of his Cuvierian notion of form a really consistent and comprehensive aesthetic of formal beauty in art. It will be convenient now, before considering the re-establishment of theories of formal beauty on new grounds supplied by the philosophy of evolutionism and the methods of evolutionary science, to survey, very briefly, the relevant points of interest in the sciences of morphology and comparative anatomy as these manifested themselves as two of the predominating interests of pre-Darwinian natural science. It will be recalled that it was stated in the previous chapter that both at the popular and learned levels, the study of form was in the foreground of interest concerning investigation of the animal world.

In the early part of the nineteenth century three main attitudes prevailed towards the study of form in the animal kingdom. The first of these was teleological and based on the assumption of an intimate relation between form and function. This was the view of Cuvier. The second school of thought, disregarding function, built up a "pure" or abstract morphology, based on the transcendental notion of an archetypal form. It was Etienne Geoffroy Saint-Hilaire and his followers who adhered to this view. Opposing both was a group of materialist physiologists whose investigations, particularly in the field of the cell theory, led to the disintegration of the organism by its analysis into its various functions, explainable in purely mechanistic terms. This last is obviously of no interest to the present discussion, as being unadaptable to the purpose of providing any fundamental model or principle for the development of art theory.

Of the two first-mentioned, however, it will be of value to note the progress. Cuvier and Geoffroy Saint-Hilaire entered into a lengthy controversy concerning the basis of the formal classification of animals, Cuvier representing the comparative anatomists, and Geoffroy Saint-Hilaire the morphologists. In the view of the anti-evolutionary comparative anatomists, four basic types existed in the animal world and animals could be classified by comparison of one or all of their organs, while according to the morphologists, all animals evolved from one original archetype. It

has often been stated, erroneously, that the debate was between evolutionism and the fixity of species, but it would be truer to say that it concerned the fundamentals of formal theory more generally. The debate, which took place in 1830, was won by Cuvier, whose general conclusions appeared all the juster for being supported by accurate statements regarding the form of the particular animal under discussion, which his opponent's unfortunately were not. Geoffroy Saint-Hilaire had made some quite elementary errors regarding the structure of the creature, and these served to render his whole theory suspect. However, he was not without adherents to his views, and, curiously enough, the foremost English anatomist, Richard Owen, coming under the influence of the German Naturphilosophie, adopted his theory rather than the more widely-accepted one of Cuvier. Thus, in the 'thirties and 'forties, when the prestige of Cuvier was at its peak, English natural science was under the sway of transcendental morphology, and by mere accident, continued to be so, even in the 'forties and 'fifties when the Naturphilosophie became unfashionable, and after the establishment of Darwinism. The retention of transcendental morphology was due to Darwin's relative lack of interest in matters pertaining to form. Actually, he lacked morphological training, and this showed up in the fact that of the fourteen chapters of the first edition of the Origin of Species, only one discussed the all-important issue of form. Briefly, Darwin, for the most part,

accepted the ideas of Geoffroy Saint-Hilaire and Owen, misinterpreting Cuvier, and left it up to his followers, Haeckel, Gegenbaur, and, in England, Huxley, Lankester, and F. M. Balfour, to adapt the existing morphology to evolutionary ideas. Thus, well into the mid-eighties, transcendental morphology prevailed, almost seeming to be more an offshoot of Naturphilosophie that of Darwinism.

It was not this new evolutionised transcendental morphology, however, which provided the foundation of the new attitudes to formal beauty in aesthetics. The perplexity of Eastlake, whose attempt at a comprehensive aesthetic of formal beauty was confounded by his adherence to the notion of absolute beauty which was more akin to transcendental thought than to the teleological theory fundamental to his major interest, relative beauty, was not to be repeated. Eastlake had obviously pondered considerably the question of the proper sanctions for an aesthetic of form. His failure is indicative of the conflicting developments that thought on form was undergoing in the natural sciences at the time. The prestige of Cuvier was far-reaching, but his teleological approach was facing a tough competitor in England, in the guise of Owen's transcendental morphology. Eastlake's confusion reflects the wish to both follow the overall empirical tendency in natural science, by confining himself to Cuvierian principles, and, at the same time, to pay tribute to transcendentalism. As we have seen before, this was part of a general tendency evident in the work of other aestheticians.

But interest in this vein of enquiry waned, when new contenders for the attention of students of the beautiful appeared. Morphological studies had dominated the approach to animal science early in the century; now with the publication of the Origin of Species, the great new interest in evolution was to take its place. The first of the new trends of thought derived from this was the Darwinian explanation of formal beauty noticed in the first chapter. The second, of which distinctive varieties existed in the work of Herbert Spencer and Grant Allen, and, secondly, of Vernon Lee, was the new psychology based on evolutionist methods -- the "natural historical" approach. Thirdly, there appeared a new interest in the development of form in art as analogous to the development of organic form, on natural principles, which has been mentioned in the preceding chapter and which was complemented by an attempt to suggest mechanical means for the analysis of formal beauty in art. This analysis was then to serve as the basis for a new attempt at the classification of art-works and the description of their development as an autonomous entity, obeying fixed laws of internal development. Vernon Lee was the initiator of this line of attack.

It is chiefly the second and third methods of dealing with the problem of formal beauty that are of interest here. Something has already been shown of the first, and of the anthropological essays at an evolutionary explanation of form. These earlier views were largely abandoned by Vernon Lee, but the Darwinian and Spencerian

attitudes and ideas still form the main material of the work of Grant Allen. In an article, "The Origin of the Sense of Symmetry," in Mind, July, 1879,[1] Allen seems to accept Darwin's view that animals to some extent share man's pleasure in symmetry but claims that man's intellectual superiority makes him far more capable of deriving pleasure from this sort of order and regularity. He thus sees the origin of taste as the "recognition of an intelligible plan as distinct from a mere chaos." His answer to the problem of what first produced the taste for symmetry is partly an organic one based on Spencer's, and partly the old omnipresence-of-order-in-nature idea — these he describes as "the active element, due to the rhythm and recurrence of organic movements, and the passive element, due to the constant observation of symmetry in external nature...."[2] Besides the recognition of order, symmetry is preferred for two other reasons. One is mere custom — we like what we are used to and so the demand tends to continue. The other is that symmetry is regularly associated with human handicraft, in which we take pleasure, or at the sight of which we experience "a distant form of sympathy, not unmixed with admiration for skill."[3]

In his major work, Physiological Aesthetics, he aims, by

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1. Vol. IV, p. 301.
2. Op. cit., p. 308.
3. Ibid., p. 313.

the use of modern scientific psychology based on accurate physiology, to demonstrate the merely physical origin of the sense of beauty. Like Spencer, he begins by assuming that all aesthetic activity arises from an excess of energy above what is required for normal life-processes.

> When we exercise our limbs and muscles, not for any ulterior life-serving object, but merely for the sake of the pleasure which the exercise affords us, the amusement is called Play. When we similarly exercise our eyes or ears, the resulting pleasure is called an Aesthetic Feeling.[1]

The beautiful is recognised by its ability to afford the "Maximum of Stimulation with the Minimum of Fatigue or Waste" to our senses of sight and hearing. Aesthetic feeling and taste are wholly organic phenomena, depending on the individual's nervous constitution. The perception of form depends entirely on the number and relative position of the optical nerve fibres, and beauty of form depends, as Hay and others had already pointed out, on "the muscular sweep of the eye in cognizing adjacent points."[2] If excessive fatigue results from the muscular act of seeing, the resulting perception will be of the ugly. If, on the other hand, perception is accomplished by the easy action of the muscles, the form appears beautiful. Allen then discusses the relative beauty of figures, adding nothing new to the views mentioned earlier. The love of symmetry he attributes here to more narrowly organic origins. Love of

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1. Op. cit., p. 34.
2. Ibid., p. 168.

symmetry is due to our liking for what does not waste energy.

Interestingly, in the light of the later work on form of Roger Fry, Allen claims that the observer is unable to attend to both form and colour simultaneously; the "optical consciousness cannot readily be divided." The perception of beauty of form he rates as a higher aesthetic feeling than that of colour. If we can sacrifice the lower pleasure of colour to the higher one of form, we derive a "gratification of unusual purity; thus importing into the estimate a vague emotional feeling." Apropos of this, Allen remarks on a recent reversal of taste in England in favour of plain earthenware vases in exquisite shapes above gaudy overcoloured and ungainly vases in the "Parisian" taste. This puts one in mind of Fry's preference for cheap earthenware pots of simple but beautiful proportions above more sophisticated examples of the potter's art. The trend toward placing an unprecedentedly high value on the formal element of beauty was apparently well established before the theories of Vernon Lee and the Bloomsbury aestheticians appeared.

To Vernon Lee, writing contemporarily with Grant Allen, the latter's ideas were already old-fashioned. Though she was a thorough-going evolutionist, her essays in aesthetics were based also on a wide reading beyond this in psychology and in continental aestheticians, and her work shows a far more persevering search for a valid basis for a theory of formal beauty. Although she denies that her method is experimental, (which she defines as consisting

mainly in laboratory work) her reliance on protracted and concentrated self-observation in galleries qualifies her to count as an experimental aesthetician. What Vernon Lee took from Darwinism was not only its methods and aims, however, but the conviction that the history of art and the variety of works of art could be rationally systematised on the basis of the analogy of organic evolution. This is the point of departure for her article "Comparative Aesthetics," already referred to in the previous chapter.

This analogy is also the underlying assumption in her article, "Anthropomorphic Aesthetics," which appeared first in the Quarterly Review, April, 1900. On the two notions of the autonomy of art and of formal beauty as the characterising element of art she bases her entire theory -- "only the study of the work of art itself can reveal what answers to the name of beauty, and on what main peculiarities of form this quality of beauty depends." To support this, she refers to the disclosures of the anthropological studies of art:

> The...notion that to be beautiful implies a relation entirely sui generis between visible and audible forms and ourselves, can be deduced from comparison between the works of art of different kinds, periods, and climates. For such comparison will show that given proportions, shapes, patterns, compositions, have a tendency to recur whenever art is not disturbed by a self-conscious desire for novelty.[1]

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1. Op. cit., repr. in Beauty and Ugliness and Other Studies in Psychological Aesthetics, Vernon Lee and C. Anstruther-Thomson, London 1912, p. 10.

She then stresses the need for a scientific method to replace the "fruitless speculations" and "random guesses" of philosophers and art critics. The study of art has already been considerably advanced by the use of diagrams and illustrations by Ruskin and continental aestheticians, but would be benefited still further by the use of mechanical devices like casting and photography.

> ...the study of what beauty is can be carried on only by the scientific methods of comparison and elimination. And we can symbolise as well as exemplify this method as applied to visual art, by taking the photograph of a real object and that of the same object artistically rendered; effacing, adding to, altering each until the two have become similar; pursuing the same system of practical analysis and synthesis with works of different kinds and degrees of merit; determining by such elimination and integration what constitutes what we call "beauty;" and then unifying our conclusions by statistically treated comparison of recurrent artistic forms, of which the uniformity of recurrence would prove the universal acceptability.[1]

The fallacy involved in the use of a method involving photography is only too apparent. However, from this basis was to be elaborated a psychological analysis of the properties of form. Here Lee advocated the new natural history methods of psychological study which had been developed over the past few decades. The question was, to determine two factors in the individual's response to certain examples of formal beauty.

> What facts of consciousness in the first place, what physiological processes in the second, appear to underlie or to accompany the satisfaction in certain forms as being beautiful,

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1. Op. cit., p. 12.

and the dissatisfaction in certain other forms as being ugly?[1] She then proceeded to stress the variety of the responses evoked by the observation of form, and the need to distinguish clearly between these. Historians, psychologists, archaeologists and connoisseurs have all contributed to the disclosure of this fact of aesthetic perception, but the importance of it has remained unnoticed. The basic distinction is between form as mere figure, and form as representing an object. These two qualities of form may affect us in different ways, and even contradictorily, so that what appears ugly as a mere collection of lines, planes, and colours, when identified with the object these represent, may affect us as beautiful. This preoccupation with the disengagement of figure from representation later becomes, in the work of Roger Fry, the basis of a whole new attitude to form in art. Like Fry, Lee insists on the importance of the distinction between seeing and recognising. The latter is an "abbreviated way of seeing" and is

> usual whenever we have to decide what a fact of sight probably represents in order to adapt our action or to pass on to some other similar interpretation; it is the way of seeing characterising either rapid change in the world around us or rapid shifting of our own attention. But the thorough and, so to say, <u>real seeing</u>, the perception of the visible form in its detail and its whole, takes place whenever we are brought long or frequently before the same external things, and have occasion to grow familiar with their aspect:...the characteristic of this seeing, as distinguished from recognising, being the survival, in our memory, of an image, more or less vivid,

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1. Ibid., p. 13.

of that thing's visible presence.[1]

In objects we merely recognise, we tolerate ugliness, but in familiar objects, we demand beauty, and, in works of art, the enduring fascination they hold for us, "their intrinsic merit," is the attractiveness of their forms. The full appreciation of form in art involves empathy or the interpretation of form

> ...according to the facts of our own inner experience, the attribution to form of modes of being, moving, and feeling similar to our own; and this projection of our own life into what we see is pleasant or unpleasant because it facilitates or hampers our own vitality.[2]

A more extended examination of Vernon Lee's psychological views and researches and their evolutional implications will be reserved to the following chapters.

In tracing the development of what may be thought of as the orthodox thought of the century on the subject of formal beauty, nothing has been said of those writers who spring most immediately to mind in connection with the idea of the beautiful. It has become the common proceeding to view the aestheticism of certain artists, poets, and critics as part of the connected development of a creed of art for art's sake. This is seen as beginning with the poetry of Keats, whose elevation of the beautiful into the region of the numinous was taken up by the Pre-Raphaelites. For instance,

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1. Ibid., p. 16.
2. Ibid., p. 17.

G. H. Ford has stated that the Victorians read and valued Keats for his aesthetic attractions, and in some measure, for escape from the problems created by the inroads of science into religious faith.

> They read and loved a poetry of richly sensuous beauty, and they appreciated it for that without worrying too much about those penetrating little asides in Sleep and Poetry and Endymion or in the letters (after their publication in 1848). It represented, for many, the Bible of the Aesthetic Movement....[1]

The cult of beauty thus established, with some aid from Ruskin on the theoretical side, was considerably secularised and passed on by Pater to the group of Decadents of whom Oscar Wilde was the foremost spokesman. All these artists were more or less in revolt against the mundane -- the ugly encroachments of modern materialism. For Pater, protest against modern dreariness took the form of a retreat into an intense inward emotional life, as noted earlier. Wilde, on the other hand, manifested a deep distaste for both continental positivism and the native dogma of truth to nature. None of these writers was positively affected by the prestige of the natural sciences, nor were they primarily interested in specifically formal beauty, but as the poems and letters of Keats and the essays of Pater and Wilde show clearly the attitudes underlying the reaction from the mainstream of science-oriented aesthetic enquiry, for the sake of balance, these will be briefly considered.

Keats published no manifesto, nor did he leave any coherent

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1. Keats and the Victorians: a Study of His Influence and Rise to Fame 1821-1895, Yale 1944, p. 31.

body of aesthetic thought, yet, as Albert Guerard writes, "Art for art's sake, as a creative impulse, not as a doctrine, had no more perfect exponent."[1] In fact, many of the beauties of Keats's poetry have their origin in the art of the past, in the mediaeval and the antique, and the beautiful in nature merely supplies the initiatory impulse for an escape from depressing realities into this world of ideal beauty. A passage from the Epistle to his brother George shows this. Occasionally, when the poet is lying "on the wavy grass stretched out supinely," no visions appear to him. But, he claims

> ...there are times, when those that love the bay,
> Fly from all sorrowing far, far away;
> A sudden glow comes on them, naught they see
> In water, earth, or air, but poesy.
> It has been said, dear George, and true I hold it,
> (For knightly Spenser to Libertas told it,)
> That when a Poet is in such a trance,
> In air he sees white coursers paw, and prance,
> Bestridden of gay knights in gay apparel....[2]

In his response to natural forms Keats places great emphasis on the enjoyment of beauty. This is educative in a rather different way from that envisioned by Wordsworth. In Wordsworth, nature works through formal beauty to enlarge the feeling responses of the individual to the experiences of real life. In Keats, the perception of beauty is more exclusively the perception of ideal truth, and is rather a refuge from the realities of life than a preparation for

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1. Quoted in Ford, op. cit., p. 63.

2. The Poetical Works of John Keats, ed. H. W. Garrod, Oxford 1939, p. 31, ll. 7-27.

them. Then too, art is capable of the same function, a fact in which Wordsworth shows little interest. Among the tribulations of this life — the "vale of soul-making," the most important feature of a "thing of beauty" is that it will "keep / A bower quiet for us." The imagination seems almost as much an avenue of escape from the banal as the high-road to truth of the earlier Romantics.

> ...the simple imaginative Mind may have its rewards in the repetition of its own silent Working coming continually on the spirit with a fine suddenness — to compare great things with small — have you never by being surprised with an old Melody — in a delicious place — by a delicious voice, fe[l]t over again your very speculations and surmises at the time it first operated on your soul — do you not remember forming to yourself the singer's face more beautiful that [sic] it was possible and yet with the elevation of the Moment you did not think so — even then you were mounted on the Wings of Imagination so high — that the Prototype must be here after....[1]

The motives here mentioned in Keats's poetry were continued in the poems and paintings of the Pre-Raphaelites. It is true that exact observation of nature bulked large in their programme for the creative artist, but as we have seen from Tupper's article, mentioned in Chapter Two, this did not necessarily imply a scientific attitude. In fact, Tupper believes that scientific observation is foreign to the artistic nature. What the Pre-Raphaelites aimed at was the production of an other-worldly quality of beauty or of emotional intensity depending largely on the selection of certain types of human beauty and on a freer use of colour. The pursuit of these

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1. The Letters of John Keats, 1814-1821, ed. H. E. Rollins, Cambridge 1958, Vol. I, p. 185.

ends was probably likewise at the back of their demand for exact imitation of nature. The association of intensity with aestheticism was of course not original with the Pre-Raphaelites, as Keats's letter quoted above, shows, and it was to remain a desideratum with the Aesthetes and Decadents who succeeded them.

The "gospel of intensity" according to Pater was concerned mainly with the individual's subjective response to art and life, and the desire to extract the maximum of sensation from works of art is very evident in his imaginative response to the "Mona Lisa" and to the delicate beauty of Botticelli's art. Like his predecessors, Pater demanded in art, besides intensity, a certain fusion of the ethereal and sensuous, and it was probably this impulse that lay behind his tendency to set the claims of form almost above those of content. It was the artist's duty above all to free his creation from the inclusion of matter for its own sake. Clarity of form was a first consideration for the artist. The "heat" of the artist's imagination must have "wholly fused and transformed" the material, "casting off all débris."

> Surplusage! he will dread that, as the runner on his muscles. For in truth all art does but consist in the removal of surplusage, from the last finish of the gem-engraver blowing away the last particle of invisible dust, back to the earliest divination of the finished work to be, lying somewhere, according to Michelangelo's fancy, in the rough-hewn block of stone.[1]

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1. "Style," in Appreciations, op. cit., p. 16.

Every art had its proper "sensuous material" bringing with it a "special phase or quality of beauty." The highest aim of art was to be the evocation of beauty — "fineness of truth" — through the fusion of matter with its means of ordering, through the imaginative or the "sense of fact," rather than the fact itself. This was seen as completely achievable only in music.

> All art constantly aspires towards the condition of music. For while in all other works of art it is possible to distinguish the matter from the form, and the understanding can always make this distinction, yet it is the constant effort of art to obliterate it. That the mere matter...should be nothing without the form, the spirit, of the handling; that this form, this mode of handling, should become an end in itself, should penetrate every part of the matter: — this is what all art constantly strives after, and achieves in different degrees.[1]

To Pater, art appeals neither simply to the intellect or to the senses but to a faculty partaking of both — "the imaginative reason." It is through this, "the desire of beauty," and "the love of art for art's sake," that the individual may achieve a "higher quality" to the fleeting moments of life, "simply for those moments' sake." Pater's equation of beauty with truth and his emphasis on the spiritual as depending on the power of the imagination to raise sensuous experience to the level of the exquisite has something in common with the ideas of Keats and his successors.

The plea for the imagination was taken up by Oscar Wilde, in his essay "The Decay of Lying." Wilde is in reaction against the

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1. "The School of Giorgione," in The Renaissance, op. cit., p. 135.

positivist aesthetic, represented by novels such as Zola's and those of his imitators, and against the established English tradition of nature worship. The essay is cast in the form of a dialogue between two characters, the more garrulous speaker expounding Wilde's views, and the other offering moderating comments upon these. To Wilde, art, especially decorative art, is to be placed above nature as a cultural influence. As Cyril, his mouthpiece, puts it, nature is boringly ill-organised — it lacks formal beauty.

> "My own experience is that the more we study Art, the less we care for Nature. What Art really reveals to us is Nature's lack of design, her curious crudities, her extraordinary monotony, her absolutely unfinished condition....It is fortunate for us, however, that Nature is so imperfect, as otherwise we should have had no art at all."[1]

Neither nature nor life is worth imitating in detail. The novels of Zola, for example, portray a period in which, Cyril assumes, all interest has perished. Instead of devoting himself to the accurate depiction of typical commonplaces, the artist should rely entirely on his imagination: "Life goes faster than Realism, but Romanticism is always in front of Life." But the artist too often loses his "natural gift for exaggeration" and "falls into careless habits of accuracy."

To counteract this degeneracy, Wilde proposes a new aesthetic, based on the assumption that art is entirely autonomous

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1. Op. cit., in Essays by Oscar Wilde, ed. with an introduction by Hesketh Pearson, London 1950, p. 33.

and self-regarding. "Art never expresses anything but itself." For him, unlike Pater, art does not begin with the imaginative re-creation of fact, but with the creation of the beautiful simply for the pleasure involved in contemplating the unreal. It originates in the decorative impulse. "Art begins with abstract decoration, with purely imaginative and pleasurable work dealing with what is unreal and non-existent." It is only later that art begins to assimilate the raw material of life and nature to its own ends; art then "recreates it, and refashions it in fresh forms, is absolutely indifferent to facts, invents, imagines, dreams, and keeps between herself and reality the impenetrable barrier of beautiful style, of decorative or ideal treatment." Decadence sets in when the portrayal of life becomes an overwhelming motive in the artist.

Wilde, using a favourite device of wit, goes so far as to stand the truth-to-life-and-nature dogma on its head. He asserts that life imitates art. Life has a conscious drive to find expression and "Art offers it certain beautiful forms through which it may realise that energy." Thus we have certain fashions of beauty appearing in human society. For instance, the art of the Pre-Raphaelites has produced the real-life imitation of a certain type of female beauty that was their especial fascination. In certain circles one was sure of encountering

> ...the mystic eyes of Rossetti's dream, the long ivory throat, the strange square-cut jaw, the loosened shadowy hair that he so ardently loved, there the sweet maidenhood of "The Golden

> Stair," the blossom-like mouth and weary loveliness of the "Laus Amoris," the passion-pale face of Andromeda, the thin hands and lithe beauty of the Vivian in "Merlin's Dream."[1]

In the same fashion, what we see in nature is dependent on the landscape fashion of the moment. Turnerian sunsets were now outmoded, — one should profess admiration for nothing but the effects achieved by the Impressionists. In short, it was now art, not Wordsworthian nature, that produced "forms more real than living man;" it was art that one looked to for "the great archetypes of which things that have existence are but unfinished copies."

In the writings of Wilde, then, we find the ultimate position reached by the trend away from the scientific observation and natural principles that were the identifying traits of the central stream of theories about formal beauty in the nineteenth century. The new evolutionary aesthetics may have provided a more congenial atmosphere for the cultivation of hedonism, but how far Wilde may have been in sympathy with the effects of the evolutionary philosophy on art theory is impossible to determine. Certainly, in "The Critic as Artist," he praises ironically the "sweet reasonableness" of Darwin's philosophic temper, but the context of this suggests that Wilde sees aesthetic activity primarily as the means of escape into serenity and that his appreciation of Darwinism goes no deeper than approval of its determination to eschew the discussion

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1. Op. cit., p. 55.

of inflammatory issues. It would be true to say, then, that the major effort of the century at the development of an aesthetic of formal beauty was motivated by a wish to adapt existing aesthetic ideas to contemporary interests in the natural sciences -- and, as a consequence, in philosophy -- and that the aesthetic movement, in its regressive anti-materialistic tendencies, stood out against orthodoxy.

Chapter IV

THE ANALYSIS OF FORM IN ART

Attempts at finding ways and means of analysing form in art lagged considerably behind other formal studies in aesthetics during the nineteenth century. Why this should have been so is fairly apparent. Paradoxically, the particular scientific spirit of the mid-century both advanced a scientific attitude to the study of form in art and, on the other hand, militated against it by its over-zealousness for natural description. In its desire for exactness it tended to overlook the incalculable element in art which only the aesthetic sensibility of a Roger Fry — combined, of course with precise and extensive observation — could bring to light. Early on, the Romantics and the Reynolds school of artist-aestheticians had little to say on the subject of formal analysis of works of art. Coleridge alone among the Romantics tried to put his theory of organic form to work as a basis for

analysing works of art — notably in his Shakespearean studies. Wordsworth, as has already been demonstrated in Chapter Two, failed in this course, and the reactions of the later Romantics, Shelley and Keats, to form in art were emotional rather than analytic. The Associationists, of course, had nothing to say on the subject. Apart from the geometrical studies of D. R. Hay and his followers, and of Bell, mentioned before, and the aesthetic analyses of Ruskin which were built on natural observation, we have to wait until after the close of the century to see Vernon Lee's proposals for analysis of form in art re-interpreted and put into practice by Roger Fry. The work of Fry on form proper belongs, chronologically speaking, exclusively to the twentieth century, but as the researches leading to it were begun in the 'nineties, and as his work is the natural conclusion to the phase of aesthetics under consideration, an examination of it will be included in this chapter.

As we have seen before, the drift of nineteenth-century thought on form both in science and art was from an intense interest in the physical details and life of nature for their own sake towards a more and more penetratingly scientific attitude. The initial passion for natural description, as we saw, turned increasingly to an interest in the nature of form, and, with the establishment of Darwinism, to the desire to account for the phenomena of nature and art purely as the products of the working of natural laws. In this, of course, reference was constantly made to the

concept of organic evolution. The works of Coleridge, as representative of the attitude to nature as yet untrammelled by the growing authority of conservative natural science, of Ruskin as evidencing the no-man's-land between the dissolving of the old traditions and the adopting of the new science, and, finally, of Roger Fry as implementing all in these movements that had stood the test of experience, and of the new Darwinian metaphor of organic development, will serve to illustrate the progress of the analysis of form in art in the period.

To begin with Coleridge, then, it has already been said that he attempted to make his basic notion of organic form the means of analysing form in art. We have already seen, in the last chapter, how he used it to reveal the special beauty of Raphael's "Galatea." That the notion of revealing the organicism of art — the life informing the image — was Coleridge's aim, is difficult to demonstrate convincingly short of referring the reader to the whole of his Shakespearean Criticism. That his aim was indeed to use his organic theory as the means to establish a new foundation for criticism is obvious from the terms of his advertisement of his lectures on Shakespeare and Milton. As everyone knows, Coleridge frequently inveighed against the false principles of Neo-classical criticism which, he considered, dwelt more on the condemnation of faults than the disclosure of beauties, and it is plain that his purpose was, to develop a means of analysis whereby the intrinsic

worth of the work of art — its self-consistent vitality — could be illuminated. His purpose in lecturing on Milton and Shakespeare was thus to illustrate "the Principles of Poetry, and Their Application as Grounds of Criticism...."[1]

To return to the first proposition — that Coleridge's approach to criticism was determined by his intention to discover the inner life of the work under examination — we may note first that in his notes on Romeo and Juliet he draws an analogy from nature in describing Shakespeare's peculiarly fine co-ordination of the elements of his art.

> Whence [arises] the harmony that strikes us in the wildest natural landscapes, — in the relative shapes of rocks, the harmony of colours in the heath, ferns, and lichens, the leaves of the beech and oak, the stems and rich choc[ol]ate brown branches of the birch and other mountain trees, varying from verging autumn to returning spring — compared with the visual effect from the greater number of artificial plantations? The former are effected by a single energy, modified ab intra in each component part. Now as this is the particular excellence of the Shakespearian dramas generally, so is it especially characteristic of the Romeo and Juliet.[2]

As with Raphael's "Galatea," so with Romeo and Juliet, it is the working of the conscious-will-plus-imagination that creates the inner life of the work of art. This makes it the true imitation of nature, described in Chapter Two, in which the natura naturans is captured. For different genres, different conditions obtain under

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1. Shakespearean Criticism, op. cit., Vol. II, p. 23.
2. Op. cit., Vol. I, p. 5.

which this life is sustained. What is appropriate to the structure of a romance play is inadequate in a historical play. The one subsists happily in the rarefied atmosphere of the imaginative generated by the author; the other requires a heavier substance of logic and circumstance. Coleridge explains this in commenting on The Tempest.

> Prospero's interruption of the courtship has often seemed to me to have no sufficient motive; still his alleged reason... is enough for the ethereal connexions of the romantic imagination, although it would not be so for the historical.[1]

It is always Coleridge's purpose to show how the part relates to the whole, and, by using his sensibility, which he considers the critic's most effective tool, he frequently resolves seeming difficulties like the above, by showing their integration in the life of the play.

But it is not only the single work of art that is viewed as an organism, the whole of Shakespeare's opus is suggested to be the result of an organic development. This is shown by Coleridge's notes on Love's Labor's Lost.

> According to internal evidence [this is] the earliest of Shakespeare's dramas, probably prior to the Venus and Adonis, and sketched out before he left Stratford. [The] characters [are] either impersonated out of his own multiformity, by imaginative self-position, or of such as a country town and a school-boy's observation might supply — the curate, schoolmaster, the Armado (which even in my time was not extinct in the cheaper inns of North Wales). [Note] the satire too on

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1. Ibid., p. 121.

> follies of words. Add too that the characters of Biron and Rosaline are evidently the pre-existent state of his Beatrice and Benedict. Add too the number of the rhymes, and the sweetness as well as smoothness of the metre, and the number of acute and fancifully illustrated aphorisms. Just as it ought to be. True genius begins by generalising and condensing; it ends in realising and expanding. It first collects the seeds.[1]

However, Coleridge has nothing to say about the development of form specifically in Shakespeare's plays, and it was not to be the idea of form either as developing or as organic that was to be taken up as a basis for analysis of art form by our next subject, Ruskin.

As his standard for the analysis of form in pictorial art, Ruskin took the close observation of nature. He criticises severely those critics who castigate an artist for lack of fidelity to nature without themselves ever having made a minute acquaintance with the appearance of the natural world. This is to a large extent the fault of the materialistic sophistication of the age; his contemporaries have lost the close Wordsworthian bond with nature:

> When will they learn it? Hardly, we fear, in this age of steam and iron, luxury and selfishness. We grow more and more artificial day by day, and see less and less worthiness in those pleasures which bring with them no morbid excitement, in that knowledge which affords us no opportunity of display.... those who do not care for nature, who do not love her, cannot see her. A few of her phenomena lie on the surface; the nobler number lie deep, and are the reward of watching and of thought.

This last distinction explains why works like Turner's are appreciated

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1. Ibid., p. 83.

only by an élite.

> The artist may choose which he will render: no human art can render both. If he paint the surface, he will catch the crowd; if he paint the depth, he will be admired only — but with how deep and fervent admiration, none but they who feel it can tell — by the thoughtful and observant few.[1]

The correct imitation of natural form took first place in Ruskin's consideration of a painting. Next to this came, not outline, but chiaroscuro, which he considered to be inseparable from form — a proper use of chiaroscuro being the most effective element in the rendering of form: "the truths of specific form are the first and most important of all; and next to them, those truths of chiaroscuro which are necessary to make us understand every quality and part of forms." The truths of "specific form" is, it goes without saying, only to be discovered by the closest and most patient contemplation of nature. Whereas it is impossible to receive a clear impression of colours from nature, form is always distinct to the observer. It is enquiry into the forms above all else of nature, then, that Ruskin uses as the guideline in his analysis of form in art, and this is the reason why the analysis of natural forms — clouds, rocks and so on — bulks so large in Modern Painters.

If this intense preoccupation with fidelity to nature gives a consistency to Ruskin's criticism, it also imposes the

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1. "Art Criticism," The Artist and Amateur's Magazine, January 1844, pp. 280-87, repr. in Modern Painters, Vol. I, pp. 650-51.

severest limitations on it. Painters are praised or blamed as they conform to the one ideal, and Ruskin rarely departs from this consideration to enlarge on other kinds of beauties in the pictures he is discussing. The early religious painters of Italy are accorded some respect as they seemed to be attempting naturalism, but on the whole, their "grasp of nature is narrow" and its treatment "too severe and conventional." Similarly, the old landscape painters neglected the formal beauty of nature. In painting trees they were "utterly regardless of all that is beautiful or essential in the anatomy of their foliage and boughs." They lacked the necessary emotion of love for nature and therefore selected for imitation "her most vulgar forms, because they were most easily to be recognized by the untaught eyes of those whom alone they could hope to please." In his praise of Giovanni Bellini's treatment of sky we can see Ruskin transferring something of his own devoted precision of observation to the painter. The picture, he admits, is atypical of Bellini.

> It is remarkable for the absolute truth of its sky, whose blue, clear as crystal, and, though deep in tone, bright as the open air, is gradated to the horizon with a cautiousness and finish almost inconceivable; and to obtain light at the horizon without contradicting the system of chiaroscuro adopted in the figures, which are lighted from the right hand, it is barred across with some glowing white cirri, which, in their turn, are opposed by a single dark horizontal line of lower cloud; and to throw the whole further back, there is a wreath of vain cloud of warmer colour floating above the mountains, lighted on its under edge, whose faithfulness to nature, both

> in hue, and in its irregular shattered form, is altogether exemplary.[1]

Here, Ruskin reconstructs the painter's methods entirely according to his nineteenth-century way of thinking. Later, Fry was to examine Bellini's pictures, and find them, as Ruskin did, the product of their age, but also, as Ruskin never could, full of beauties of their own peculiar kind.

But if Ruskin's attempts at bringing out the virtues of works of art fell short of the ideals originally proposed by Coleridge, his methods, so far as they went, were, at the least, based on as thoroughly scientific a foundation as he could contrive. We have only to consult his analyses of natural form in Modern Painters and elsewhere, which are too prolonged to exemplify here, to assure ourselves of his comprehensive grasp of the minutiae of nature in all her forms and effects. Then too, concerning the act of observation itself, he did not rest content with dogmatic assertions concerning what was and was not plainly visible in any view of nature. The reader is invited to perform a few simple experiments to assure himself of the truth of the statements offered. Perhaps Ruskin's greatest contribution to the analysis of form in art was his ability to produce drawings and diagrams in illustration of the points made. His aim was always to convey precise information supported by some kind of visual demonstration. He did not always

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1. Modern Painters, Vol. I, pp. 180-81.

put his schemes into effect, but this proposal regarding Canaletto shows the methods he had in view. It was for this tendency that he was later praised by Vernon Lee.

> The mannerism of Canaletto is the most degraded that I know in the whole range of art. Professing the most servile and mindless imitation, it imitates nothing but the blackness of the shadows; it gives no single architectural ornament, however near, so much form as might enable us even to guess at its actual one; and this I say not rashly, for I shall prove it by placing portions of detail accurately copied from Canaletto side by side with engravings from the daguerreotype....[1]

It was also this achievement, as well as the emphasis placed on form as the primary component of the work of art that was to be taken up by Roger Fry.

But Fry did not limit his appreciation of works of art by referring it to a single formal principle as Ruskin had done. With him is revived the organicism of Coleridge which sees the relation of each part to the whole, and the newer evolutionary principle -- already perhaps faintly adumbrated by Coleridge but never followed up -- is adopted. Coleridge could see development within the works of a single artist in relation to the development of that artist as a human personality, but Fry sees, in keeping with the new emphasis on the autonomy of art of Vernon Lee, the developments within art as a self-generating, self-consistent

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1. Modern Painters, Vol. I, p. 215.

entity.[1] As evidence of this last, and of his eclecticism, -- he was apparently aware of the anthropological investigators -- we have his remarks in an article, "The Exhibition of French Primitives, Part II," in the Burlington Magazine.

> The history of the development of an art may be looked at from two points of view. It may be looked on as a gradual conquest of the forms of nature, a gradual discovery of how things appear to the eye; or, on the other hand, as the logical and internally necessitated evolution of a rhythm; a process in which the rhythm of one generation of artists is bound, by its very nature, to generate the rhythm of the next. There come certain moments in this process when the rhythm which the artist inherits is more, others when it is less, propitious to the expression of the highest truths about the external universe: but always the rhythm tends to move along the lines of its own separate and predestined course.[2]

But eclectic though he was, Fry did not accept at random all that had been written on the foundations of art during the nineteenth century. If we can see in him something of Coleridge, Ruskin and the later evolutionists mentioned above, he was wary of the popular notion of Herbert Spencer and Grant Allen that art was fundamentally an extension of normal biological processes. Fry was always interested in science -- his father had published several works on natural science and he himself had taken a first in it at

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1. In this Fry was not as original as J. K. Johnstone would appear to suggest in his The Bloomsbury Group. A Study of E. M. Forster, Lytton Strachey, Virginia Woolf, and Their Circle, New York 1963, p. 95.

2. The Burlington Magazine for Connoisseurs, Vol. V, June 1904, p. 279.

Cambridge. But despite a background which we might expect to produce a narrow empiricism such as Ruskin's, we find in his mature work that the formal preoccupation, which natural science had tended to develop in aesthetic analysis during the preceding decades, is transformed by Fry's particular sensibility -- and probably, too, by the new evolutionary outlook -- to an implement of far wider application than hitherto. Fry's criticisms, beginning as they did with the examination of old masters using traditional critical methods, and ending with an entirely fresh approach through his own theory of form, illustrate the movement from the old aesthetics to the new.

That he was aware of the significance of his own work in relation to the developments of the century preceding it is obvious, and that he understood the nature of these developments can be seen from his introductions to the Discourses of Sir Joshua Reynolds. He realises that much of what Reynolds wrote is no longer applicable under the conditions revealed since his day by modern science, yet some precepts stand for all time. For example, Fry is in accord with Reynolds's belief that the end of art is to appeal to the cultivated imagination, and, because it is suspect by the masses, must always be a "sporadic and isolated phenomenon" and "practised almost in secret like a proscribed religion." He finds something of his own scientific outlook in Reynolds's pronouncement on art criticism:

> He declares that, though he must believe in the existence of genius, "these refined principles cannot be always made

> palpable like the more gross rules of art; yet it does not follow, but that the mind, may be put in such a train, that it shall perceive, by a kind of scientific sense, that propriety which words can but very feebly suggest." It is on the basis of a belief in this logic of the sensations and emotions, however difficult or even impossible it may be to define, that all criticism and discussion of works of art must rest.[1]

Yet, as stated before, it is impossible to fall back passively on the precepts of tradition. In the practice of art itself the century has shown itself revolutionary, yet no firm standard of judgement has been evolved. Each must seek to build for himself a new set of principles on which to rationalise the processes of art. He feels, for the present, that the unrest of the preceding century has "left us almost paralysed, without faith, and with no very certain notion of how a work of art is made." There seems now, as there had not been in the revolutionary 'nineties, a return to respect for tradition.

Yet this must not take the form of a blind, uncritical acceptance of all that Reynolds has said. He points out that Darwinism has struck at the base of Reynolds's idea of nature, and seeks a new means of coming to terms with the classical direction to "follow nature." In his later essay, "Negro Sculpture," Fry was to reiterate how science had "blown away" the "whole well-ordered system" of classical aesthetics.[2] In the first place

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1. Discourses Delivered to the Students of the Royal Academy by Sir Joshua Reynolds, Kt., With Introduction and Notes by Roger Fry, London 1905, p. 139.

2. Athenaeum, 1920, repr. in Vision and Design, Penguin Books, 1961, pp. 85-86.

Reynolds's notion of the perfect form free of accident must be modified, since now there is little justification for the notion of accident -- all is the result of immutable law. To us, even more than to the aestheticians of the preceding decades, the average form is not likely to be identical with the ideal. Probably, too, it is we, rather than nature, who decide what is beautiful. We decide on the excellence of a harmonious form, then discover an example in nature to meet our demands. Nature tends to serve function rather than beauty -- it is the type of the city magnate not the Greek athlete who now tends to predominate, to be typical.

> This only may be said, that the full development of certain organs designed for certain functions tends towards a definiteness and precision of form which has an aesthetic value. This is especially so with organs formed for motion, as the wings of a bird and the legs of a horse. The more perfectly the latter fulfil their functions the freer will they be of obscuring connective tissue; the clearer and more apparent will the articulations and insertions of the muscles become; the nearer will they approach to that desirable lucidity of form which our sense of beauty requires.[1]

But the greatest blow to Reynolds's theory is that modern science hesitates to define species at all. Hence we must look for new bases for aesthetic theory.

> We must look for them not in Nature, regarded objectively, but in the reaction of the human mind to Nature, being satisfied if we can find in that a sufficiently wide basis to give our conclusions validity for the ordinarily constituted human being without seeking for a divine sanction.[2]

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1. Op. cit., p. 43.

2. Ibid., p. 46.

It was Tolstoy's What is Art that finally freed aesthetic speculation from the fruitless search for principles of beauty. Enough has been said to show that Fry was fully aware of the value of tradition, and aware too, how Darwinian science had necessitated a total reconstruction of it.

However, as was remarked before, though Fry's approach was above all that of the aesthetic scientist he did not seek to confuse biological life with aesthetic experience. His use of all organic metaphor was perfectly conscious, and the suggestion that true art was linked in any way with the struggle for survival and the life of instinct he rejected. In his contribution to An Outline of Modern Knowledge, "The Arts of Painting and Sculpture," his first care is to distinguish true or pure art from commercial or biologically-based art. Some works of art are made for the sake of publicity — for example, the monumental art of Egypt — or "in response to supposed needs arising out of superstitions or religious beliefs." Both these involve labour "analogous to man's ordinary activities in response to the struggle for existence." There exists, however, a body of pure art.

> ...we find a whole class of works of art in which no such biological aims are envisaged — works due to a gratuitous impulse which we call the aesthetic impulse. We find here a purely spiritual activity analogous to that which impels men to search for truth. It is this pure, free and biologically useless activity which has produced those works which are among the most cherished possessions of mankind.[1]

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1. Op. cit., ed. W. Rose, London 1931, p. 909.

It is only through the free operation of the aesthetic impulse that the course of art history is directed. Fry's remark that "Every type of imagery which has come into existence tends to persist in the same form, except in so far as it is acted upon by a free aesthetic impulse," is reminiscent of Vernon Lee's views. And like Pater, and Coleridge, Fry thinks that his free impulse, or the artist's idea must thoroughly penetrate and fuse with the matter it informs.

> We see something akin to our spiritual being penetrating and moulding matter. The fullest pleasure occurs when, having realised the general idea, the main relations of the members of a building, the main composition of a picture, the disposition of the limbs of a sculptured figure, we are able to consider the interior relations of the parts, proceeding always from larger to smaller relations, without finding any point at which the informing idea breaks down, until we come to the matter of the work, the grain of the stone or the canvas. It is important that we should feel at every point this impregnation of matter by the idea.[1]

The view expressed here is made the organizing principle of the history of art which follows. Fry was very aware, as Vernon Lee had been, that the artist can do little more than use his aesthetic impulse to modify forms already available to him, though Fry's view is expressed in terms that allow a greater degree of spontaneity. This is obvious from his essay, "Three Pictures in Tempera by William Blake," which first appeared in the Burlington Magazine in 1904. So-called savage art is extremely pure, being

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1. Op. cit., pp. 914-915.

motivated by nothing other than the love of harmonious form and the desire to use this as a means of expression. The formal attainment in art of negro peoples, being thus freed of the need for accurate imitation, is superb. They "really conceive form in three dimensions" which is rare in early European sculpture. Greek art, on the other hand, is devoted to the narrow ideal of imitation of natural beauty, and so has been an inhibiting influence in art almost to the present day. Yet the letting loose of emotion is not conducive to successful aesthetic creation. While all good art is rooted in feeling, the artist must distance himself from his work. He explains this in discussing the work of Utamaro, a Japanese artist.

> It is a noteworthy curiosity that some of his pornographic prints are genuine works of art. It is curious, because in almost all other periods and countries we notice that a preoccupation with this particular feeling has been disastrous to the aesthetic quality of the resultant imagery....whilst, on the one hand, the whole history of art shows that art is nourished upon the actual emotional life of the artist, and springs, at least in part, from his desire to realize that more fully by expression, on the other hand we observe that it is only when the artist can stand apart from his own personal feeling and can view it with a certain detachment, as part of a greater whole, that the expression attains the unity and organic coherence of a great work of art, and we may well suppose that the emotion of physical desire is too physiological to be amenable easily to this contemplative detachment.[1]

For Fry, in both aesthetic processes -- creation and perception -- there is more than a little of the scientific attitude. Yet,

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1. Ibid., p. 938.

despite this scientific bent, Fry was careful to tread the middle way:

> ...increased scientific investigation of phenomena, increased knowledge of how things present themselves to our sight, changes the mode but does not necessarily increase the power, of pictorial expression.[1]

And again, "we have no guarantee that in nature the emotional elements will be combined appropriately with the demands of the imaginative life...."[2] Preponderance of the scientific attitude did not assure progress in art, as his remarks on the Florentine painters of the fifteenth century show. Though they had mastered a new science of visual appearances they "never make the mistake of confusing their new science with their art." In the same way, Fry himself did not confuse what service science could offer to art in the way of detached analysis of formal properties with the aesthetic response of the critic, as will be seen later. The works of the Impressionists, to the extent that they "lacked design and formal co-ordination" are to be condemned. They were the product of "pseudo-scientific and analytic method." In revolt against this was the great return to formalism inaugurated by Cézanne — "the re-establishment of purely aesthetic criteria in place of the criterion of conformity to appearance — the rediscovery of the

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1. "Three Pictures in Tempera by William Blake," Burlington Magazine 1904, repr. in Vision and Design, op. cit., p. 175.

2. "An Essay in Aesthetics," New Quarterly 1909, repr. in Vision and Design, p. 38.

principles of structural design and harmony." This in turn "led to a new canon of criticism."[1]

... As has been said previously, Fry considered art and life to be discrete entities. This is especially plain in his discussion of the modes of perception, in "An Essay in Aesthetics," which first appeared in the New Quarterly in 1909.[2] He distinguishes between the vision which is purely founded in our biological life, and made up of "instinctive reactions to sensible objects," and the imaginative vision which calls for no reaction to our material circumstances. The first, as Vernon Lee would have agreed, amounts to no more than the mere recognition of objects for practical purposes —

> Now this specialization of vision goes so far that ordinary people have almost no idea of what things really look like, so that oddly enough the one standard that popular criticism applies to painting, namely, whether it is like nature or not, is the one which most people are, by the whole tenor of their lives, prevented from applying properly.[3]

In fact, since all they have ever really attended to are paintings, nature, for them, tends to look like art. There is, of course, nothing new in this conclusion — Ruskin and Wilde had said so long before. Fry develops his discussion of perception further in "The Artist's Vision,"[4] which first appeared in the Athenaeum, 1919, and

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1. Vision and Design, op. cit., pp. 18-19.
2. Op. cit., p. 22.
3. Ibid., p. 29.
4. Ibid., p. 45.

concludes that "Biologically speaking, art is a blasphemy." He distinguishes degrees of perception, the lowest grade being that of the pragmatist's recognition mentioned above; the next, the child's who has not fully developed this survival technique -- consequently he "looks at things with some passion" and tends to collect the attractive and the curious. This persists in some into adulthood. It is "curiosity vision." The stage past this is that at which we "look at objects not even for their curiosity or oddity, but for their harmony of form and colour." This function can be performed only with respect to works of art. The final and greatest misapplication of biological vision is that of the creative vision of the artist, which is "the furthest perversion of the gifts of nature of which a man is guilty." Only by total detachment from the practical implications of appearance is this to be attained.

> Almost any turn of the kaleidoscope of nature may set up in the artist this detached and impassioned vision, and, as he contemplates the particular field of vision, the (aesthetically) chaotic and accidental conjunction of forms and colours begins to crystallize into a harmony; and as this harmony becomes clear to the artist, his actual vision becomes distorted by the emphasis of the rhythm which has been set up within him. Certain relations of directions of line become for him full of meaning; he apprehends them no longer casually or merely curiously, but passionately, and these lines begin to be so stressed and stand out so clearly from the rest that he sees them far more distinctly than he did at first.[1]

It is obvious from Fry's preoccupation with rhythm and harmony

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1. Ibid., pp. 48-49.

that he maintains certain elements of classicism that had been used to rationalise form in art during the preceding century, as already shown. (He retained, too, the old notion of order in variety.) But, on the scientific side, the preeminence given to the consideration of form, too, is a relic of this period of thought. What is peculiarly Fry's own contribution is also here present — the "detached" and yet "impassioned" vision of the artist is perhaps a projection of Fry's own states of mind before works of art. What he aims at bringing to light is the artist's scientific manner of using form for the purpose of expressing emotion. He describes the process in his book on Cézanne.

> We may describe the process by which such a picture is arrived at in some such way as this:- the actual objects presented to the artist's vision are first deprived of all those specific characters by which we ordinarily apprehend their concrete existence — they are reduced to pure elements of space and volume. In this abstract world these elements are perfectly co-ordinated and organized by the artist's sensual intelligence, they attain logical consistency. These abstractions are then brought back into the concrete world of real things, not by giving them back their specific peculiarities, but by expressing them in an incessantly varying and shifting texture. They retain their abstract intelligibility, their amenity to the human mind, and regain that reality of actual things which is absent from all abstractions.
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> Of course in laying all this out one is falsifying the actual processes of the artist's mind. In reality, the processes go on simultaneously and unconsciously — indeed the unconsciousness is essential to the nervous vitality of the texture.[1]

This is to be the basis of the renaissance of art theory briefly

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1. Cézanne: a Study of His Development, London 1927, pp. 58-59.

adumbrated in the introduction to Reynolds's Discourses.

Yet, though this notion of scientific but expressive form provided the line of attack for all Fry's mature criticism of individual works, and in part the basis for his historical account of art, it never became the distorting obsession that the truth-to-nature of earlier scientific critics like Ruskin had been. Nor did he ever descend to dogmatic assertions, like Clive Bell's notion of "Significant Form," about the nature of the aesthetic experience. The flexibility of application of his idea that the aesthetic experience involved, among other things, the recognition of inevitable relations between the components of a work of art to some extent saved him from this, as we shall see later. This ability to perceive relationship was nevertheless analogous to a scientific process of thought, though far removed from it in its essential nature.

> The case of the generalizing intellect, or rather its analogous, in art is ...difficult. Here the recognition of relations is immediate and sensational -- perhaps we ought to consider it as curiously akin to those cases of mathematical geniuses who have immediate intuition of mathematical relations which it is beyond their powers to prove -- so that it is by analogy that we may talk of it at all as intellectual....the motives of science are emotional, many of its processes are purely intellectual, that is to say, mechanical. They could be performed by a perfectly non-sentient, emotionless brain, whereas at no point in the process of art can we drop feeling....[1]

If Fry had left his theory of perception of relations merely as

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1. "Art and Science," Athenaeum, 1919, repr. in Vision and Design, op. cit., pp. 71-72.

applying to the notion of abstract formal relations divorced from considerations of colour, line, and texture, and other less readily calculable components of artistic composition, his analyses of specific works of art might have remained as narrow as Ruskin's. But, as we have seen, just as intellectual and emotional elements are inseparable in aesthetic perception, so are formal and material elements. As Fry never wearied of pointing out, we lack an adequate terminology in aesthetics, but the following passage gives some idea of the comprehensiveness of Fry's scientific analogy in which he tries to encompass form and matter, intellect, feeling and imagination as part of an organic whole.

> It is when the composition of a picture, adequately supported as it must be by significance of texture, reveals to us the most surprising and yet inevitable relationships that we get most strongly the final unity-emotion of a work of art. It is these pictures that are...the most significant for contemplation. Nor before such works can we help implicitly attributing to their authors the same kind of power which in science we should call 'great intellect,' though perhaps in both the term 'great imaginative organisation' would be better.[1]

It is thus that, by practising the principles implicit here, Fry was to return art analysis to the direction pointed early in the nineteenth century by Coleridge. The attempts at science of the mid-nineteenth-century aestheticians such as Hay were to be put aside as inadequate. Since geometry can only explain the purely decorative effect of art and not the representational aspect it

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1. Ibid., p. 74.

is inadequate to explain the aesthetic effect of paintings. However, it may be useful in pointing out roughly the technical composition of forms in a painting, and Fry himself does this in discussing Renoir and Cézanne. But here its use ends.

Fry always viewed his theories as tentative, and his methods as experimental. His system he puts forward as no more than "a provisional induction" from his own aesthetic experiences. We have already seen something of the basis of his views; it remains to consider how these were to be applied in actual analysis. That Fry relied greatly -- perhaps as greatly as Coleridge -- on his own sensibility is apparent. Apart from the reference of the structure of Renoir's and Cézanne's pictures to simple geometrical figures, Fry's essays give no great insight into his actual methods of analysis. Believing, as he did, that the function of art was the embodiment in expressive form of the artist's spiritual experiences, and that in this, plastic form was analogous to form in music, it was his principal care to bring his audience to an understanding of the significance of the related forms in the work under review, and to do this, so far as possible without disrupting the organic unity of the whole. If his declared working principles were few, the results they brought were considerable. There can be little doubt that Fry not only exerted a tremendous influence on public taste, but that he opened up a new area of aesthetic experience.

In "An Essay on Aesthetics," cited earlier, he offers

this simple analysis of the emotional elements in the design of a picture into six categories. The first is the rhythm of line,[1] "the record of a gesture," the second is mass, the third space, the fourth light and shade, the fifth colour and the last (only a possibility) "the inclination to the eye of a plane, whether it is impending over or leaning away from us." He was later to say in "The Art of Florence," 1919, that "neither perspective nor anatomy has any very immediate bearing upon art...." In addition to these simple analytic categories, Fry makes use of a variation of the notion that all aesthetic emotion is related to physical sensation — "the graphic arts arouse emotions in us by playing upon what one may call the overtones of some of our primary physical needs." This is an early and never a deeply important element in Fry's thought. To the last, he maintained his refusal to offer any facile suggestions as to the true nature of the aesthetic emotion. Often he remarked on the similarity of effect of form in music and in the plastic arts, and thought our reactions to these depend on the "deeper subconscious layer of our nature." Although he probably took the idea from the Symbolists, especially Mallarmé whose poems he translated, he twice quotes Michelangelo:

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1. Fry was fond of the musical analogy which he had, no doubt, from the Symbolists, and he uses it to explain "rhythm of line" in an essay on Giotto eight years earlier in the Monthly Review.

"Finally good painting is a music and a melody which intellect only can appreciate and that with difficulty." Here again we see the essential quality in Fry's attitude to art — the desire for balance between the two factors of science and feeling.

As was suggested before, the idea behind Fry's scientific approach to the analysis of form in art was not the old narrow idea of comparison with nature. Imitation of nature was, if anything, likely to be an impediment to successful expression by the artist. This passage from Cézanne shows what Fry proposed instead.

> The transposition of all the data of nature into values of plastic colour is here complete. The result is as far from the scene it describes as music. There is no inducement to the mind to retrace the steps the artist has taken and to reconstruct from his image the actual woman posing in her salon. We remain too completely held in the enchantment of this deep harmony. Though all comes by the interpretation of actual visual sensations, though the desire to remain absolutely loyal to them was an obsession with Cézanne, the word realism seems as impertinent as idealism would be in reference to such a creation. It belongs to a world of spiritual values incommensurate but parallel with the actual world. It is an example of what Jules Renard calls la vérité créatrice d'illusions.[1]

From what had been done by preceding aestheticians he took the theory of the preeminence of formal elements in the work of art, and then made examination of these, without specific reference by them to anything external to it, the foundation of his method. In essence, his method was that of Darwinian natural science, which ideally would examine phenomena unprejudiced by any teleological

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1. Op. cit., p. 69.

considerations. This is of course impossible to achieve completely, but in freeing art to a large extent from overt religious and moral associations, Fry was following the spirit of Darwinism. He sought to promote understanding by accurate analytical description of the object as it functioned within its native environment — the autonomous world of art — rather than to classify by the narrow application of supposedly scientific, and, by the old implication of the mid-century, religious-moral principles. Where Ruskin was satisfied with the semblance of science by adopting pragmatically the apparatus of observation and classification wholesale into aesthetics, Fry went deeper to find the principle behind and to use it with great sensitivity and flexibility to show, as Coleridge had tried before him to show, how each element in the work of art contributed to sustain the organic life of the whole. The very fluid nature of the idea of "perception of relations" — which only becomes apparent from a full study of his actual analyses — enabled Fry to extend his observations to include all the organizational elements of a picture. "Plastic" was a favourite term of his and he applied it to colour as well as to form, in bringing to our attention the organicism of a work. For the first time there appeared a criticism which was truly empirical, detached and objective, unbounded by any obligations to narrow ideals, yet at the same time revelatory of a whole new world of aesthetic emotion. Admittedly, this last was peculiarly Fry's own, but the subjective element must always remain both a limitation and a desideratum of

aesthetic analysis.

To come now to some actual examples of Fry's theories at work, we may begin with his favourite subject, Cézanne, on whose work he produced an essay and a book-length study. The latter is the better source for our purpose. In discussing a landscape of Cézanne's, "La route du Château Noir," done in the late 'eighties, Fry shows not only how his own sensitivity and clarity of formal analysis can bring a specific picture to life for us, but how he could relate this particular example of the artist's work to the body of his work as a whole. Fry's ability to analyse and describe, to reveal the nature of a work of art in its relations to art as a whole, did not vitiate his ability to make value judgements; rather, it became the basis of his assessments. Cézanne's picture is built, as always, on a simple "geometrical scaffolding;" his strength as an artist lies in what he can achieve on this uncomplicated basis:

> Here the "crystallization" of the forms is complete. The planes interjoin and interpenetrate to build a design where the complexity does not endanger the lucidity of the relations. Not only has Cézanne's notion of plasticity and of the plastic continuity here attained its plenitude, but the artist controls it with perfect freedom. If we compare it to the works of the early maturity — those of 1877 for instance — we see how far Cézanne has developed in this direction, how much more he feels at his ease before the "motive," how much sooner he dominates and controls it. By now he is able to trust much more to the habitual inclinations of his sensibility and to his acquired science. Not only have the forms been reduced to those elements with which we are familiar, but here also the colour has become increasingly systematic. He modulates in the chosen chromatic key almost as a musician does. He accepts from nature, not so much the precise indications as before, but rather suggestions of modulations which he then renders according to the progressions of his scale. It must be understood that this is only a

> difference of degree; what we have here is only a freer and bolder use of the method of his earlier work. It implies that he can by now modulate with such suppleness and with so rich a variety of transitions, that he can give the feeling of living reality by a still more generalised interpretation of the actual vision. Cézanne himself was fond of this word, using "modulate" instead of"model," and it is one of many indications of how clear sighted he became in his maturity about the essential bent of his own genius.[1]

A practising artist himself, though an unsuccessful one, Fry was in the best possible position to discuss the development of the artist's techniques, and a consideration of these bulks large in all Fry's criticism. His sense of art history blended with his sense of the individual technical progress of the artist.

> The marvellous nicety of Cézanne's colour sense prevails above all. He was evidently excited, liberated and enriched by what the Impressionist vision revealed to him in nature, and, instead of losing his way in the infinitude of atmospheric colour, as so many weaker natures have done, he seems to have known from the first how to dominate its complexity and render it organic. The too summary synthesis of his earlier colour is here completely abandoned, and he enters into all the complexities which nature, seen from this angle, reveals. The smallest face of stone wall becomes, for his analytic and searching gaze, of unspeakable richness. Its grey is composed of tints that tend now towards violet, now towards blue or blue-green, with hints here and there of citron yellows and oranges. And yet all remains solidly in its plane.[2]

A study of his Giovanni Bellini confirms Fry's strong interest in the individual work as part of the autonomous development of art. Many passages from this could be included in support of this depth of interest, but the above quotation concerning Cézanne gives the

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1. Op. cit., p. 76.

2. Ibid., p. 36.

essence of his approach. He was always, as we have been professedly a pragmatist, but, as we have also seen, was saved from mere dry academicism by his confidence in the validity of his own subjective states before works of art. He was never afraid to articulate these, as we see from his remarks on Cézanne's "Lazarus."

> This method of the Lazarus suggests the influence on our artist of some idea of dramatic colour — the attempt to convey by the shock of these masses of unbroken colour — and almost by some direct physiological effect on us — the tragic emotion at which he aimed.[1]

Briefly, then, with all his acuteness of sensibility, as Fry regarded the work of the critic as analogous to the work of the scientist, and considered that the highest pleasure in art was similar in kind to the highest intellectual pleasure, he penetrated beyond the superficial attempts at science that the particular scientific interests of the mid-nineteenth century produced in aesthetic analysis, to create a criticism which was at once oriented towards our two greatest philosophical legacies from the past century — organicism and Darwinism.

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1. Ibid., p. 15.

Chapter V

PSYCHOLOGICAL APPROACHES TO FORM

The natural sciences physiology and biology did not begin to influence psychological thought in England until well past the mid-century. The basically physiological approach of Hartley in Observations on Man gave place to the more limited classifications of mental phenomena of the Associationists Thomas Reid, Dugald Stewart, Thomas Brown and William Hamilton. Reid's rejection of the relevance of physiological studies -- especially Hartley's -- as tending to a degradation of the dignity of man, and his founding of a line of thought confined more or less strictly to the discussion of mental faculties as a branch of philosophy, reached its foreseeable outcome in what is considered to be the culminating work of the Associationist school, the Analysis of the Phenomena of the Human Mind of James Mill, published in 1829. Mill's approach to psychology held away for some time, and it was only with the coming

of Alexander Bain's The Senses and the Intellect in 1855 and The Emotions and the Will in 1859 that the relevance of physiological studies to the exploration of mental phenomena was rediscovered. In 1855, the year in which Bain's first book appeared, Herbert Spencer's Principles of Psychology was also published. Though less generally influential than Bain's work, it had considerable significance for later psychological aestheticians such as James Sully and Grant Allen. Spencer's system was basically biological. He sought to refer all the phenomena of nature and society to one fundamental principle — that of evolution. In choosing Bain's work rather than Spencer's for review, the Edinburgh Review indicates what may have been the general reaction to Spencer's views.

> ...Mr. Spencer, though possessing great analytic power, is a less sober thinker than Mr. Bain, and, in the more original portion of his speculations, is likely to obtain a much less unqualified adhesion from the best minds trained in the same general mode of thought.[1]

Later, with the publication of Darwin's works, the Edinburgh Review was to display hostility, not only to all evolutionary thought in psychology, but even to Bain's work, which at this earlier date it singled out for praise. However, despite conservatism such as that exhibited by the Edinburgh Review, it was the ideas of the evolutionists that were to decide the direction of new thought in psychological aesthetics, including considerations of the perception of

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1. Op. cit., Vol. CX, October 1859, p. 289.

form, in the later half of the century.

Early on, however, the Associationist outlook held sway in aesthetic thought for a considerable period, and did not entirely die out until the last decades of the century. Since the Associationist attitude to the explanation of psychological states connected with the perception of form was so pervasive in aesthetic thought in the period, before considering the influence of the natural sciences on the psychological aesthetics of form, we must make some reference to the views of the aesthetician most representative of this trend, Archibald Alison. Alison's Essays on the Nature and Principles of Taste was first published in 1790 and went through many editions in the first half of the nineteenth century. In his essay "On the Nature of the Emotions of Sublimity and Beauty," Alison gives the basis of his position regarding the perception of formal beauty. The effects of both the sublime and beautiful on the human beholder are due to the operations of the imagination in setting up trains of associated thoughts in his mind. This is true of both the beauty of art and of nature, and it is to be expected that early cultivation of the mind and sentiments through art will enrich the appreciation of natural beauty.

> When any object, either of sublimity or beauty, is presented to the mind, I believe every man is conscious of a train of thought being immediately awakened in his imagination, analogous to the character or expression of the original object. The simple perception of the object, we frequently find, is insufficient to excite these emotions, unless it is accompanied with this operation of the mind, — unless, according to common expression, our imagination is seized, and our fancy busied in

> the pursuit of all those trains of thought which are allied to this character or expression.[1]

But the trains of thought, we are later told, are of a special kind. They consist of "the ideas of emotion," and these are always linked by one organizing principle — eg., the "ideas" are all either gay, pathetic, melancholy, etc.; furthermore, the emotion of beauty is felt only when the perception of the object is accompanied by some feeling of affection for it.

In the succeeding essay "On the Sublimity and Beauty of the Material World," Alison tells us that, "Of all material qualities, that which is most generally, and most naturally productive of the emotions of sublimity and beauty, is form." This is so because it is form that is fundamental to the existence of objects. But the common opinion that some forms are by nature more beautiful than others is false. Beauty of form is to be attributed only to the associations forms give rise to in the mind of the perceiver and to qualities of which they are expressive. These last are connected with the nature of the object distinguished by the form, and from the use of form in art. These Alison terms "natural" and "relative" beauty respectively. Another source of expression is that of "accidental association" and this produces "accidental beauty."

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1. Essay on Beauty, Lord Jeffrey; and Essays on the Nature and Principles of Taste, Archibald Alison, repr. of 5th ed., London n.d., p. 69.

In discussing the natural beauty of forms, he analyses form into matter bounded by lines of various kinds — angular, or, secondly, curved or winding lines. Simple forms are composed of one type of line, complex forms of more than one. These two are connected with widely differing associations. The hard, strong, durable kinds of natural objects are usually composed of angular lines, whereas fragile, delicate kinds are usually made up of curvilinear ones. Our stock of associations is amassed from our observation of nature.

> In all those bodies which have a progress, or which grow and decay within our own observation, the same character of form is observable. In the vegetable kingdom, the infancy or youth of plants is, in general, distinguished by winding forms. The infancy and youth of animals is, in the same manner, distinguished by winding or serpentine forms; their mature and perfect age, by forms more direct and angular. In consequence of this connexion, forms of the first kind become, in such cases, expressive to us of infancy, and tenderness, and delicacy; and those of the second kind, of maturity, and strength, and vigour.[1]

Likewise, we come to the conclusion that angular forms express roughness, sharpness etc., and winding forms softness, smoothness, and delicacy. Serpentine lines are associated with ease and volition; angular forms express force or constraint. Alison discusses the qualities of lines at some length, concluding that strong and angular lines are the least beautiful, and that fine, winding lines are the most beautiful, and that this arises entirely from the process of

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1. Op. cit., pp. 172-73.

association described above. Beauty, it is continually reiterated, depends on expression, and this is the outcome of our original contemplation of nature. Even uniformity and regularity are beautiful, not in themselves, but because they express design or intention. Similarly, beauty of proportion arises from the expression of fitness of parts to the end for which they are intended.

Beauty, then, is ascribable to the operations of the various faculties of our minds which, through the imagination, are brought into contact with the objects of nature and art. This is the natural constitution of our mental being, and it is traceable to a final cause — the benevolent design of the creator. Under these conditions the universe around us becomes "a scene of moral discipline," where, by the power of the imagination, and through our divinely given ability to associate form with feeling we are continually affected by moral influences.

> Whether in the scenery of nature, amid the works and inventions of men, amid the affections of home, or in the intercourse of general society, the material forms which surround us are secretly but incessantly influencing our characters and dispositions. And in the hours of the most innocent delight, while we are conscious of nothing but the pleasures we enjoy, the beneficence of Him that made us, is employed in conducting a secret discipline, by which our moral improvement is consulted, and those sentiments and principles are formed, which are afterwards to create not only our own genuine honour, but the happiness of all with whom it is our fortune to be connected.[1]

But an even greater influence is connected with the forms of nature

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1. Op. cit., p. 322.

and art, and that is the influence leading to a religious sentiment. In closing his essay, Alison launches into a panegyric on the benevolence of God's design: "nature, in all its aspects around us, ought only to be felt as signs of His providence, and as conducting us, by the universal language of these signs, to the throne of the Deity."[1] The universe is the "temple of the living God, in which praise is due, and where service is to be performed." The magnitude of Alison's influence over early nineteenth-century thought on natural form can be assessed by referring the above-quoted remarks back to their scientific context as outlined in Chapter One, and to the views of the aestheticians of the earlier half of the century, described mainly in Chapters One and Three. Alison's preoccupation with nature as emblematic, and, to a lesser extent, with the desire to refer his views for sanction to natural observation, are the hallmarks of the earlier thought of the century on form.

A truly scientific approach in psychology to aesthetic problems did not show itself until the publication of the work of Bain in the mid- and late fifties. As far as formal aesthetics goes, Bain's psychology is disappointingly shallow and lacking in originality — in fact he is throughout his work more of a compiler than an innovator, apart from his insistence on the importance of physiological considerations in the study of the mind. Bain was

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1. Ibid., p. 323.

well acquainted with the considerable advances in knowledge of the physiology of the nervous system made in England earlier in the century, although he knew little of the outstanding German achievements in this field. But his insistence on the importance of physiological studies was a considerable contribution which changed the course of psychological enquiry in the nineteenth century. The old Associationist notion of the mind as the passive receiver and mechanical organizer of sense impressions, which for some time had been thought to be inadequate, was to give way, under Bain, to the concept of the mind as active, which had been so important an element in Coleridge's thought earlier. With Bain the feelings and the will both contribute to deciding what ideas pass through our minds. But above all, Bain's painstaking accumulation of data — which he described as his "natural history" method, and which earned him the reputation of having the approach of a botanist — redirected methods of psychology decisively from the old philosophical approach to the natural scientific. He rejected the notion of any unifying agent in the mind, such as the soul, and elaborated his system by the use of Associationism, from a basis of nerve currents. He considers the nerves and brain to form an organic entity and derives from this the elementary states of mind such as instinctive muscular movements and the workings of the senses. Movement, sensation and instinct are the fundamentals of conscious life, which in turn manifests itself through feeling, willing and thinking. Bain adopted

much of the thought of the Associationist school concerning cognition, and this element, plus his preoccupation with the physiological bases of states of mind is apparent in his discussion of the effects of form on the perceiver.

While he thinks that delight in visual form is due to the "intrinsic muscular pleasure of the eye" he also thinks that associated ideas contribute a great deal to this, for example, the charm of curved outline lies partly in its association in our minds with the "human form, as adapted for love."[1] He was to consider this interest "instinctive and hereditary," in deference to the theories of the evolutionists. But later in his Mental and Moral Science, Bain gives more precise and physiologically-based elaboration of the responses evoked by curved forms. As well as "intrinsic muscular pleasure of the eye," proportion and association may contribute to our gratification. The associations are both of a physiological and even simply physical kind.

> In Curved Forms, the primitive charm of the curve line may be combined with proportions and with pleasing associations. The circle, and the oval, contain an element of proportion. Besides these effects, there is in the curved outline the suggestion of ease and abandon. The mechanical members of the human body, being chiefly levers fixed at the end, naturally describe curves with their extremities; it is only after a painful discipline that they can draw straight lines. Hence straightness, in certain circumstances, is suggestive of restraint, and curvature of ease. The beauty of the straight form, when it is beautiful, will arise partly from proportion, and partly from the obvious utility of order in arrangement.

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1. The Emotions and the Will, London 1899, p. 242.

> In the dimension of up and down, form or outline is interwoven with the paramount consideration of sustaining things against the force of gravity; in other words, we have to deal with Pressure and Support. The evils of loss of support are so numerous, so pressing, so serious, that adequacy on this score is one of our incessant solicitudes, a real 'affection of Fear.' The mere suggestion of a possible catastrophe from weakness of support is a painful idea; and the existence of such pains renders the appearances of adequate support a kind of joyful relief.[1]

The Edinburgh Review has rightly assessed Bain's approach to emotional elements as decided by the necessity "to allow a much greater range to the instinctive portion of our nature;" Bain has "exhibited what may be termed the natural history of the emotions, rather than attempted to construct their philosophy."[2] At this stage, before the effects of evolutionism had made themselves felt, the Review was still willing for discussion of the "animal part" of our emotions to be undertaken. However, it later qualified its approval of Bain's work on the emotions by pointing out that, compared with his classification of intellectual elements, this was far from complete:

> ...we still desiderate an analytical philosophy of the emotional, like that which he has furnished of the intellectual, part of our constitution. Much of the material is ready to his hand, and only requires co-ordination under the universal law of mind which he has so well expounded.[3]

This is especially so in regard to the aesthetic emotions. Ruskin

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1. Op. cit., London 1872, p. 297. (First published 1868.)

2. Loc. cit., p. 309.

3. Ibid., p. 311.

has ascribed these to the benevolent providence of God, but if Bain had carried out what seemed his projected scheme in its entirety, he might have revealed their psychological foundation. The Review is of the opinion that

> ...the great ideas, so well recognized by Mr. Ruskin, when they have sunk sufficiently deep into our nervous sensibility, actually generate, by composition with one another and with other elements, the aesthetic feelings which so nicely correspond to them.[1]

It seems, on the question of aesthetic feelings at least, that the Edinburgh Review leans more to the Associationist element in Bain than the natural scientific.

If the Review inclined to value the work of Bain above that of Herbert Spencer, this was not the decision of later psychological aestheticians. Sully was equally aware of the contributions of Bain and of Spencer, and displayed in his writings a far greater interest in Spencer. Likewise, as mentioned elsewhere, Grant Allen considered his work as an extension of Spencer's. Spencer's Principles of Psychology was first published in 1855. With the appearance of this work we have the first major incursion of biology into the field of aesthetic enquiry in psychology and of psychology in general. Biological science, for Spencer, as it was to do for all serious scientific thinkers from the 1870's onward, presupposed the principle of evolution. On this principle

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1. Ibid., p. 312.

his entire "Synthetic Philosophy" was to be founded. The fundamental approach to the synthesis of the "knowable" was to trace the origin of forms out of formless matter. Brett explains the relation of this to psychological enquiry as follows.

> The guiding principle of the treatment is the idea of a continual adjustment between the different parts of the universe. This idea, at the point which touches psychology, is expressed in the definition of life as 'the continuous adjustment of internal relations to external relations.' Biology is the science of life in general; the science of conscious life or psychology treats in the same way the processes through which the conscious organism maintains itself in relation to its environment.[1]

In the entire system of "Synthetic Philosophy," psychology stood midway between biology and sociology. Indeed Spencer's thought can only be understood as part of a vast intellectual structure by which he hoped to rationalise and systematise the phenomena of the entire universe. In First Principles he expounds his fundamental evolutionary principle. His sources for this were ultimately von Baer's developmental law, Lyell's Principles of Geology and Mill's Logic.[2] As Hearnshaw says, Spencer was not a scientist, but "a man obsessed by certain scientific ideas." His effort was all directed not at investigation of phenomena, but at constructing a system of thought, unfounded on extensive reading or research, to

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1. Brett's History of Psychology, ed. R. S. Peters, London 1953, p. 629. (Originally published in three vols, 1912-1921.)

2. A Short History of British Psychology 1840-1940, L. S. Hearnshaw, London 1964, p. 41.

account for them.

> What brought Spencer's constructive processes to rest -- to a state of equilibration, as he would have termed it -- was usually a verbal formula. His works are a succession of magnificent abstract verbal formulae, such as his well-known definition of evolution as "a change from an indefinite, incoherent homogeneity, to a definite, coherent, heterogeneity, accompanying the dissipation of motion and the integration of matter." What these formulae mean is sometimes a puzzle. "An afferent nerve communicates a wave of isomeric transformation to the vesicle at its inner end." "Ideas arise when compound co-ordination passes into doubly compound co-ordination." But they appeared to satisfy that streak in Spencer which he described as "a dash of the artist."[1]

What Spencer did in practice was, largely, to adopt the Associationist psychology. His best contribution to general psychological thought was probably his notion that the mind evolves. For example, we see from his First Principles how the evolutionary principle can be applied to the development of the mind.

> To show satisfactorily how states of consciousness, originally homogeneous, become heterogeneous through differences in the changes wrought by different forces, would require us carefully to trace out the organisation of early experiences. Were this done it would become manifest that the development of intelligence, is, under one of its chief aspects, a resolving of the once confused aggregate of objects known, into an aggregate which unites extreme heterogeneity among its multiplied groups, with complete homogeneity among the members of each group.[2]

Evolution, of course, implies "the continuous redistribution of matter and motion," and in discussing the evolution of mind

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1. Op. cit., p. 42.

2. Epitome of the Synthetic Philosophy, F. Howard Collins, London 1894, p. 49.

throughout the whole scale of sentient beings, reference to their physiological aspects is unavoidable. Here we can see an example of the links that Spencer was carefully forging to weld together the biological and psychological elements in his massive philosophical synthesis. He thinks that "Psychology is not demarcated from Biology by a sharp line," and frequently refers back in the course of his exposition to the basic evolutionary principle just mentioned.

> A greater rate of molecular change enables a smaller nervous system to generate an amount of motion equal to a larger one. The higher blood-heat of Birds places their relatively smaller nervous system on a par with that of mammals.
>
> The reasons for first looking at psychological phenomena from this apparently strange physiological point of view, and for disclosing the universality of the relation between the degree of nervous evolution and the quantity and heterogeneity of the produced motion, is, that we are primarily concerned with psychological phenomena as phenomena of Evolution; as incidents in the continuous redistribution of matter and motion.[1]

As he later puts it, fundamentally, "The problem is to interpret mental evolution in the terms of redistribution of Matter and Motion."

In aesthetics, the idea of development (with reference to the race), and his linking of aesthetic feelings to physiological states (with reference to the individual), were taken up by later psychological aestheticians. His discussion of the aesthetics of form, like Bain's, is slight, and he is chiefly remembered for his

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1. Op. cit., p. 186.

use of the "play" theory, which was of course, not original with him. Even this is perfunctorily expressed and Spencer acknowledges that it does no more than provide a sketch upon which the psychology of aesthetics may be developed.

> ...aesthetic excitement is one arising when there is an exercise of certain faculties for its own sake, apart from ulterior benefits; so, in those cases we see that the conception of beauty is distinguished from the conception of good in this, that it refers not to ends to be achieved but to activities incidental to the pursuit of ends. In the conception of anything as good or right, and in the correlative sentiment, consciousness is occupied with representations and re-representations, distinct or vague, of happiness, special or general, that will be furthered; but in the conception of a thing as fine, as admirable, as beautiful, as grand, consciousness is not occupied, distinctly or vaguely, with ultimate advantage, but is occupied with the thing itself as a direct source of pleasure. Though in many cases this pleasurable consciousness has originally grown out of the representations of benefits to be gained, yet it has come to be a pleasurable consciousness in the object or act apart from anything beyond; and in so doing has passed into the class of feelings which includes at the one extreme the sportive activities and at the other extreme the aesthetic sentiments.[1]

Concerning form, Spencer follows received opinion. Pleasure in curved forms is due to the "unstrained action of the ocular muscles." Similarly, the cause of the pleasure we take in the perception of more complex forms has a physiological source. Much depends on the condition of the nervous system:

> When we rise from simple sensations to combinations of them, of kinds that awaken ideas and feelings of beauty, we may, I think, discern the same general and special truths. The

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1. The Principles of Psychology, Vol. II, p. 635.

> primitive source of aesthetic pleasure, is that character in the combination which makes it such as to exercise the faculties affected in the most complete ways, with the fewest drawbacks from excess of exercise. Joined to this comes...a secondary source of pleasure — the diffusion of a normal stimulus in large amount, making a glow of agreeable feeling, faint and undefinable. And...a third source of pleasure is the partial revival by this discharge of the various special gratifications connected in experience with combinations of the kind presented....beautiful arrangements of forms, are those which effectually exercise the largest numbers of the structural elements concerned in perception, while over-taxing the fewest of them.[1]

But, as with Bain, the idea of association is also pressed into service once more.

> Persons having figures that satisfy the aesthetic requirements, are more frequently than not, connected in experience with agreeable recollections. So, too, are the fine shapes of art-products — architectural, plastic, pictorial: the occasions on which these have been contemplated have mostly been occasions of happiness, social or other. This is a reason why aesthetic pleasure derived from form, though not great in the uncultured, becomes relatively voluminous in the cultured, by wealth of association. When from simple forms we pass to complex combinations of them with colours, and lights, and shades, as for instance in landscape, this indirect source of aesthetic gratification becomes distinguishable as a large one. The connexion between perception of a grand view and the multitudinous agreeable feelings brought by freedom and relaxation, mostly experienced at the same time, is too clear to permit doubt that a considerable part of the delight given, is caused by this partial revival of many past joys — some within individual experience, and some deeper than individual experience.[2]

More than merely the individual's own peculiar trains of thought and emotional reactions are aroused by aesthetic experience. As

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1. Op. cit., p. 638, 639.

2. Ibid., p. 641.

suggested in the passage above, this also brings to the fore some of the deeper, but by now vague "combinations of states" which emerged in the race in primitive times, when the pleasures of life were experienced more exclusively in close contact with natural objects. Spencer is a firm believer in progress in the sphere of aesthetic experience and activity, and thinks this will continue to be brought about by the principle for the implementation of which his work was later to be rejected -- that of the inheritance of acquired characters.

The rejection of Spencer's views by the Edinburgh Review was, on the whole, regretful and polite. With regard to Darwin's two works in evolutionary psychology, The Descent of Man, 1871, and The Expression of the Emotions in Man and Animals, 1872, the tone changed to one of bitter recrimination. Darwin's methods in collecting data were branded "acephalous" and his ideas utterly rejected. The notion that man was a descendant of the lower animals in both his physical and mental attributes was too radical and undignified -- too degrading of the sanctity of humanity -- for the conservative reviewers. Sir Charles Bell's earlier work, The Anatomy and Philosophy of Expression, which was still current in a revised reprint, was held up for comparison and lauded as the polar opposite of Darwin's reckless disregard for all traditional belief. Darwin confined himself to observation of human and animal appearances and regarded expression as the organic aspect of emotion, an acquired

habit of an organism, where Bell had taken almost the reverse line of approach, including the works of the ancient sculptors in his conception of nature, and considering the organic element as subserving the end of expression according to a benevolently conceived design on the part of the creator. He had, in this, a great deal in common with both Reynolds and Alison. The agitation of the reviewers consequent on their perusal of Darwin's work may be gauged by these passages from the review of The Descent of Man.

> ...Mr. Darwin does not confine his argument to the origin of man's body from pre-existent forms; he ventures to carry it into the region of mind, and to account for man's spiritual powers by a process of natural selection from rudiments in the lower animals. It is indeed impossible to over-estimate the magnitude of the issue. If our humanity be merely the natural product of the modified faculties of brutes, most earnest-minded men will be compelled to give up those motives by which they have attempted to live noble and virtuous lives, as founded on a mistake; our moral sense will turn out to be a mere developed instinct, identical in kind with those of ants or bees; and the revelation of God to us, and the hope of a future life, pleasurable daydreams invented for the good of society. If these views be true, a revolution in thought is imminent, which will shake society to its very foundations by destroying the sanctity of the conscience and the religious sense; for sooner or later they must find expression in men's lives....We will not here anticipate the conclusion of our own argument; but we must observe at starting, that Mr. Darwin appears to us to be not more remarkable for the acuteness and ingenuity of his powers of observation of natural phenomena, than he is for the want of logical power and sound reasoning on philosophical questions....
> Never, perhaps, in the history of philosophy, have such wide generalisations been derived from such a small basis of fact. Mr. Darwin's theory of the growth of the moral sense and of the intellectual faculty is unsupported by any proof; and the very corner-stone of the hypothesis, that the human mind is identical in kind with that of the brutes, is a mere assumption opposed alike to experience and philosophy. The view of sexual selection is greatly exaggerated, and altogether inadequate to

> explain the differences between the sexes. In a word, Mr. Darwin has chosen this crucial test of the truth of natural selection, and it has broken down at every point where it has been tried.[1]

The appearance of The Expression of the Emotions in Man and Animals provoked a far more solemn and a haughtier rejection. In this review even Bain's methods are labelled "vicious."

> Mr. Darwin has added another volume of amusing stories and grotesque illustrations to the remarkable series of works already devoted to the exposition and defence of the evolutionary hypothesis. Few, however, except faithful disciples will regard this new work as contributing much either to the author's fame, the scientific treatment of expression, or the support of the general theory. For ourselves, we must confess to having risen from its perusal with a feeling of the profoundest disappointment....In his zeal for his favourite theory, Mr. Darwin seems to regard the nobler and more distinguishing human emotions with a curious kind of jealousy, as though they had no right to scientific recognition. He dwells at large only on the lower and more animal aspects and elements of emotion, and seems at times almost unwilling to admit that an expression is human at all, unless he can verify its existence in some of the lower animals. His one-sided devotion to an *à priori* scheme of interpretation seems thus steadily tending to impair the author's hitherto unrivalled powers as an observer.[2]

But despite these unfavourable opinions, Darwin's views, like Spencer's, were undeniably not only popular, but suggestive to later psychological aestheticians. In fact, Darwin's views endured the test of time far better than those of Sir Charles Bell.

One of the most considerable of the figures who were subsequently to take up the natural scientific approach to the

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1. Op. cit., Vol. CXXXIV, July 1871, pp. 195-96, 235.

2. Op. cit., Vol. CXXXVII, April 1873, p. 492.

psychology of aesthetics was James Sully. Sully was particularly aware of the newest developments in physiology, especially the physiology of sensation, and studied under Lotze, Helmholtz and du Bois-Reymond. Since he had a very strong interest in music, Helmholtz's researches into the physiological aspects of auditory sensation were of great interest to him. But he was aware no less of the contribution to the psychology of aesthetics of his own evolutionary-minded countrymen, Darwin and Spencer, and the whole of his writings on psychology is carried out within the framework of evolutionism. However, apart from these preoccupations, Sully's psychology was, as Hearnshaw notes, "essentially of an orthodox British type." But although there was an element of Associationism in Sully's thought, like Bain, he held the mind to be engaged for most of its functions, in constructive activity as well as passive absorption.

In his first book, Sensation and Intuition, Sully discusses the relevance of the evolutionary hypothesis to psychological studies. He is anxious to avoid metaphysical discussion in psychology and this is apparent from some of his opening remarks on the relationship of the developmental way of thinking to psychology. The common ground on which the two can meet is to be that of materialistic science.

> It is in its scientific aspect that psychology presents itself to the evolutionist. For his doctrine is quite independent of the metaphysical question of Idealism and Realism, being a

> philosophy of the universe, the highest formulation of our objective knowledge. It affirms the existence of a certain order in the manifestation of material phenomena, and it may attach mental phenomena to this order by means of the vital link that holds together mind and body.[1]

Although admitting the value of such an approach, he is cautious to the point of distrust of the contributions made by Darwin and Spencer to the study of psychology. These he discusses further in his subsequent essay "New Theories of Emotional Expression."[2] He is of the opinion, for example, that by assuming certain mental faculties to exist *à priori* and ascribing their presence to inherited memories of the past experience of the race, Spencer and Darwin have thrown little actual light on the nature of those faculties. It would be safer to approach mental phenomena first from the point of view of individual experience, and only when the possibilities thus opened up are exhausted, should the evolutionary hypothesis be brought into play. In a later essay in *Mind*, "Art and Psychology," however, Sully adopts a more liberal attitude to the question of what evolutionism may contribute to psychological aesthetics.

> If we interpret psychology as including the theory of mental evolution, it may assist us in determining the greater and the less, the superior and the inferior, among artistic results. Up to a certain point indeed collected subjective reflection may arrive at such quantitative determinations,

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1. "The Relation of the Evolution Hypothesis to Human Psychology," *Sensation and Intuition: Studies in Psychology and Aesthetics*, London 1874, p. 1.

2. Op. cit., p. 23.

> and this consensus of judgment may be corroborated by the consideration of objective conditions of degree in pleasure. But beyond this the psychology of evolution supplies us with a method of comparing different kinds of aesthetic gratification, as well as their accompanying artistic forms, which is applicable in cases where the agreement of individual judgment is less distinct....the very principle of evolution implies a growth and so an expansion of faculty, that the aesthetic faculty conforms to the same laws of growth as the rational or the moral, and that by finding an expression for the precise law of this growth we may arrive at a standard of value in artistic judgment. A complete rationale of the process of aesthetic culture as seen in the individual and in the race would furnish us with definite aesthetic principles, by the help of which as much quantitative determination might probably be attained as can reasonably be looked for in a moral science, and as much as would suffice for most practical purposes.[1]

His acceptance of the contributions of physiology to the study of psychology is much less qualified than his earlier attitude to evolutionism. In his essay "The Basis of Musical Sensation" he adopts Helmholtz's physiological approach wholeheartedly, making the physiological investigation of feeling the basis of his theory of musical form, which he elaborates in the essays following. He takes the stand that the perception of harmony is as direct an intuition as that of melody: "the feeling of harmony is no product of a perception or comparison of the separate notes, but arises in consciousness just as directly and unaccountably as the peculiar effect of tone itself."[2] He follows up with a summary of the physics of sound, then a description of the physiological process

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1. Op. cit., Vol. I, October 1876, p. 478.

2. Op. cit., p. 166.

involved in aural perception, and arrives at the position that the

> pleasing effect of tone, as contrasted with mere noise, arises from the even regularity of the sequent molecular movements of a nervous fibre. The delight of harmony and of melody is connected with a simple variation in the mode of this regular sequence in two or more fibres, the molecular vibrations in each fibre acted upon being continuous and equal, but varying in their absolute rapidity in a simple numerical ratio.[1]

He realises that this is still an incomplete explanation of the process of the pleasurable perception of music, but suggests comperative studies which might be carried out to define the pleasurable element in the process of nervous excitation described above. The remainder of the essay he devotes to further investigation of musical phenomena, such as the analysis of the nervous reactions to simple tone and to harmony, along the lines suggested by the passage cited above, using Helmholtz as his guide. The technicalities of this, though interesting, are irrelevant here.

In his next essay, which Sully says follows on from the preceding one, although the linkage is not made apparent, he investigates the structure of music, using a simple formal analysis of time, melody and harmony, based on the old classical notion of unity in variety, symmetry, and so on. The essay, in fact, is a discrete entity — an attack on the subject of music from the totally different angle of formal analysis. Music, he thinks, has developed by the "gradual expansion of musical form." Within the individual work, form may be either symmetrical or progressive. Using various

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1. Ibid., pp. 169-170.

examples, he then offers an analysis of the effects of different species of time, proceeding from the simple to the more complex. Only slight musical knowledge -- a mere acquaintance with rudiments -- is necessary for a grasp of Sully's idea. He seems to be addressing the layman rather than the musician, but one wonders if even the comparatively uninformed have much to gain from a perusal for its own sake of Sully's rather gratuitous demonstration of the presence of order in musical works. However, this exposition, which is followed by similar ones of melody and harmony, is obviously intended as the second step in what aims at being as total an account of musical experience as possible. The title of Sully's book suggests that he was aware that his physiological studies and his aesthetic studies tended to persist as separate entities rather than to form an organic whole, but it must be remembered that scientific aesthetics was as yet in its earliest stages. Sully's book, given the reverence for formal study of its day, would no doubt have provided quite stimulating reading for its contemporary audience. Sully completes his enquiry into musical form by demonstrating the synthesis of the simple units of time, melody, and harmony, which he has shown to be its fundamentals, into larger thematic units and finally into the various species of composition. Among these, he traces a developmental order from the earliest attempts at musical composition to the increasingly complex achievements of later times.

His next essay "On the Nature and Limits of Musical

Expression," is an attempt to show how the form he has just explored is related to expression. In pointing out and analysing the emotional effect of music, he mentions physiological findings concerning the nervous system and refers to the evolution of musical form to substantiate his views of the nature of emotional response to music, finding some resemblance between musical form and spontaneous vocal expression. He finds three kinds of "representative character" in music.

> First of all, by the simplest process of association, musical tones seem to typify vocal action itself, viewed as a conscious play of muscular energy. Secondly, by a further process, they revive and render more or less distinctly recognizable to consciousness, varieties of emotional agitation, such as usually vent themselves in like vocal sounds. Finally, by a still longer operation of thought, these re-awakened feelings are projected in fancy behind the musical tones, so that these seem to be the utterances of another soul stirred to emotional movement.[1]

Sully then relates these three functions to the various forms analysed in the preceding essay, and comes, substantially, to the conclusion reached more recently by Suzanne Langer.

> So far as the elements of music can distinctly pourtray [sic] these varieties of emotion, its complicated structures are able to represent the varying phases of our inner life. The currents of emotion which help to fill up the river of our daily consciousness are highly various in colour and in force, and as they mingle their individual forms disappear in the whole volume of this consciousness. Even when a powerful feeling seems for the time dominant, other shades of feeling appear in the dim background of the mind. And in ordinary emotional conditions pulsation follows pulsation in swiftest flight and in the most variegated play of light and shade.

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1. Op. cit., pp. 228-29.

> Now music is capable of faintly shadowing forth these aspects of our emotional experience.[1]

Taken together, then, the three essays, though lightly enough linked, do provide as comprehensive an account as was possible of the nature and effects of form in music. In his final essay, "On the Possibility of a Science of Aesthetics," Sully shows that he realises that much is yet to be done. Scientific aesthetics, he obviously thinks, is to be identified with formal aesthetics and must be based on anthropology and psychology, and the remarks below show that physiological study is also to be included. Investigation must show how

> the pleasures of perception first arise, how it is that proportion, unity, and all that is included under beauty of form has come to be so prominent an ingredient in aesthetic impression, is one of the most interesting points in the science, which possibly admits of no definite solution except in connection with a study of other developments of the human mind.[2]

Sully was a prolific writer, producing a number of essays and books, and aesthetics was one of his strongest interests. However, the essence of his ideas appears in the examination of his first book offered above. His essay "Pleasure of Visual Form"[3] and his discussion of aesthetic pleasure in Outlines of Psychology,[4] for

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1. Op. cit., p. 233.
2. Op. cit., p. 244.
3. Mind, Vol. V, April 1880, p. 181.
4. Outlines of Psychology, with Special Reference to the Theory of Education, London 1884.

example, were essentially reworkings with reference to visual phenomena of the same fundamentals as just described. Throughout his work, the preoccupation with formal elements is most marked.

In the work of the psychological aesthetician, Grant Allen, we have a much more ready acceptance of the views of Spencer and Darwin. As shown earlier, Allen admired Spencer's work and considered his own an elaboration of principles suggested by Spencer. His aims, analogous, he says, to Darwin's, are

> to show the general relation of pleasure and pain to our organism and its circumstances;...to prove that our existing likes and dislikes in aesthetic matters are the necessary result of natural selection."[1]

He adopts the "play" theory and the term "aestho-physiology" from Spencer, and tries to show that the aesthetic feelings are "constant subjective counterparts of certain definite nervous states." He is indebted also to Bain, Helmholtz and various others. His use of these sources in giving a physio-psychological account of the experience of perceiving form has been briefly mentioned earlier, and calls for no repetition here. Compared with Sully's, with which it was roughly contemporary, his work was much slighter. He seemed ready to adopt what the earlier evolutionists and the continental scientists could offer, and contributed very little of any depth and originality to the psychological aspect of formal aesthetics.

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1. Physiological Aesthetics, p. vii.

A much deeper and more comprehensive thinker, and one far more widely read in the psychology of aesthetics and in science generally was Vernon Lee. In discussing the current state of aesthetics, Lee shows she is aware of the way in which contributions from various fields of study are to be co-ordinated into a new, more scientific, less philosophical approach to aesthetic problems.

> These unconnected studies, thus unconsciously converging in the new science of aesthetics, are themselves recent and immature. They are, respectively, the science of mind which, under the name of psychology, has only lately detached itself from general philosophy; and the various sciences dealing with the comparison, the origin and the evolution of artistic form, and which are still dependent on ethnography and anthropology on the one hand, on archaeology and what is called connoisseurship on the other.[1]

Her own use of these studies, and of the awareness of subjective psycho-physiological responses have been referred to in previous chapters. Her aesthetics, as she says, are "those of the gallery and the studio, not of the laboratory." But this does not mean that her methods are unscientific — quite the reverse. Although she rejected the work of the earlier evolutionary psychological aestheticians as inadequate, her own methods were, as she declared, those of the evolutionist. Her procedure, like Fry's, later, was to study the work of art in its natural environment, to decide under what conditions it carried out its function of stimulating the aesthetic sensibilities. She was concerned, like all the evolutionary

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1. "Anthropomorphic Aesthetics," op. cit., p. 2.

aestheticians, to discover what was the place of art in the totality of the life process both of the individual and of the race, as will be seen from reference back to previous chapters, and from this excerpt from her gallery diaries. She is here concerned with investigating the phenomena associated with Einfühlung or empathy. Here is above all an aesthetics of form.

> April 17. Terme Museum. "I am beginning to suspect that we should give but little importance to the miming, where it really exists, of the gesture of a statue. I mean of its human, actual gesture as distinguished from the movement of lines....There seems no reason why perception of form, i.e. of dynamic lines, should be in any way connected with our own gesture....I am now looking at a Muse of Tragedy, one leg raised and the other bearing the weight of the figure. But in reality what the lines are doing is a combination between the outline of a mountain group and the mass of a fluted pilaster.[1]

As this passage shows, she was continually testing her hypothesis against the facts of her own subjective aesthetic responses in the hope of bringing some kind of classificatory order to aesthetic feeling and of thus refining her ideas of its nature. The process of Einfühlung or "feeling ourselves into," which results in the perception of either beauty or ugliness, is explained as follows.

> ...modern psychology...has inclined to teach us that a revival in memory is a repetition, however much blurred and weakened, of a past process....when we interpret the forms of architecture in the terms of our own muscular pressures and strains, of our own volitional yielding and resistance, and of those combinations thereof which we designate as rhythm; we are in both cases, however seemingly different, producing in ourselves

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1. "Aesthetic Responsiveness," Beauty and Ugliness, p. 255.

> that particular dynamical experience which we attribute...to the form "into which we have felt ourselves."...that revival, according to its degree of vividness, is subject to the same accompaniment of satisfaction or dissatisfaction as the original experience. So, when this attribution of our modes of life to visible shapes and this revival of past experience is such as to be favourable to our existence and in so far pleasurable, we welcome the form thus animated by ourselves as "beautiful;" and when all these processes of attribution and revival of our dynamic experiences are, on the contrary, unfavourable to us we avoid that form as "ugly."[1]

Although Lee, in formulating this view, based her opinions originally on the Lange-James hypothesis that bodily changes were part of a feeling, not an after-effect of it, her later awareness of the work of Lipps, (a "new Darwin") and Karl Groos, caused her to acknowledge that this was erroneous. She had originally thought that the feelings connected with various muscular strains, changes of equilibrium, and respiratory and circulatory changes, were part of aesthetic emotion, varying with the contemplation of different forms and "agreeable or disagreeable according as these changes were or were not favourable to life as a whole." She was to reject this in favour of the view that bodily sensations were a consequence rather than a part of the aesthetic feeling. But in any case, the idea of aesthetic empathy can be used to account for the association of beauty with order, goodness, health, "and more complete life," and ugliness with "everything by which the life of body and soul is diminished and jeopardised." Her analytic and formalist method perhaps prompts the conclusion that there is, in actuality, no such

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1. Op. cit., p. 21.

thing as the beautiful, only individual beautiful forms. ...

> ...the aesthetic phenomenon is individual, and varies with every single individual form; and, since it consists in the attribution of an individual and varying complexus of dynamic (and perhaps organic) conditions, it must always, in real experience, bear the character of the individual form by which it is elicited. There is, in reality, no such thing as "the Beautiful." There are only separate and different beautiful forms.[1]

Einfühlung also accounts for the artist's selection of form in the creative process, since he can only select from among forms that his audience is familiar with and fully able to empathise with. Art is bound by material considerations — even by the struggle for survival.

> ...the art of any time or country was the common property of all the men thereof, simply because the craftsmen had the habit not merely of those general relations of proportion and dimension whose Empathy (Einfühlung) is agreeable to the normal human being, but also of those more special forms into which the men of different places and periods have been wont to project, by aesthetic sympathy, the modes of acting and willing most favourable to their well-being.[2]

This leads Lee on to a naturalistic explanation of the religious instinct.

> Evolutional speculation may indeed add that this harmonious vitalising of the soul, this rhythmical co-operation of so many kinds of feeling and doing, this sympathising projection of man's modes into nature's forms, and this repercussion of nature's fancied attributes in man's own life, have answered some utility by unifying consciousness and rhythmically heightening vitality. And, in the light of

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1. Ibid., p. 31.

2. Ibid., p. 34.

> these theories, the irresistible instinct will be justified, by which all times and peoples, despite the doubts of philosophers and the scruples of ascetics, have invariably employed art as the expression of religion and bowed before beauty as a visible manifestation of the divine.[1]

Briefly, then, by the use of physio-psychological observation and the evolutionary hypothesis, as shown also earlier, Lee attempts to account for and justify all the phenomena of aesthetic experience and even to suggest a reason why the aesthetic aspect of religious experience should have proved of such enduring service to humanity. With the work of Vernon Lee we reach the fullest development of the evolutionary view and the furthermost point from the religious-philosophical explanation of psychological states connected with the perception of form that marked the early thought of the century. Metaphysical speculation and the reference of phenomena to arbitrarily established classification are almost totally eschewed in favour of the inductive method.

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1. Ibid., pp. 34-35.

CONCLUSION

Throughout the foregoing discussion it has appeared that, in the nineteenth century, aesthetic thought about form was closely related to contemporary interests in the biological sciences. As attitudes to the world of nature changed in the latter, so too, were approaches to the problem of form modified in the former. We might say that there is discernible, in the period, a shift from the why of form to the how — from the illustration of the dogma of divine benevolence which was a primary factor in stimulating a profound interest in the definition of the formal criteria of species, to the study of form as it functioned in the life-process as an end in itself.

The early nineteenth century inherited from its eighteenth-century predecessors in science, philosophy, and religion, a world-picture which differed greatly from that revealed to post-Darwinians. Early on, the accepted world-picture was essentially that of Paleyism, with its absolutist view of a static, mechanistic universe divinely

created and pre-ordered. Natural science, under this view, could hope to do little more than exhaust the possibilities of collection and classification. The manner of creation was above question; the aim was to assemble and describe in accurate detail the wonderful examples of God's inventiveness and to refer these to a pre-established orderly framework based ultimately, though with constant attempts at modernising, on the concept of earlier scientific thinkers like Linnaeus and Bonnet — the Great Chain of Being. This view of the universe was not, of course, new in philosophy. It had been a staple of scientific thought among the ancients. Complementary to these views and attitudes in science were the classical aesthetic theories of imitation and of natural harmony and proportion. What happened in the aesthetic thought in the early nineteenth century regarding form, then, was simply an extension of time-honoured ways of thinking. These, as has been shown, endured until the mid-century and beyond, under the influence of conservative thinkers like Ruskin.

But, as has been shown, a new note was creeping in. With the growing prestige of empirical science, philosophical thought was inevitably affected, and the new branch of philosophy known as aesthetics was no exception to this. Increasingly, in the works of aestheticians like Macvicar, Eastlake, Blackie and others, we find attempts to give greater prominence to the quest for scientific accuracy regarding details of form in the plastic arts and to the search for natural principles on which to base a scientific aesthetic.

This followed the trend in the natural sciences that, around the middle of the century, produced the 'parade of systems.' Interest in formal criteria in both natural science and aesthetics was at its peak at this time. That conservative scientist and enemy of evolutionism, Ruskin, is perhaps the best illustration of this need to render aesthetic thought more scientifically respectable while retaining the traditional forms of thought regarding the relationship between nature and art. Ruskin and Eastlake took this trend of thought as far as it could go. In their attempt to reconcile the old absolutist aesthetics not only with their sharp awareness of the anomalies revealed to them by their minute and informed observation of nature, but with the new and disturbing knowledge that the definition of species was at best a complex and hazardous business, they were not entirely unsuccessful. But it was evident, with the growing infiltration of relativism, that the old veins of thought were largely worked out, and that it was time to sink a fresh shaft in different territory.

Nor was it only with the coming of Darwinian evolutionism that this need became apparent. To the Romantics, Wordsworth and Coleridge, it had been obvious at the turn of the century. The world-view of Paley and the scientific thought associated with this were outmoded to the minds of the Romantics, whose own ideas were based, as has been said, on the vitalistic thought of the less orthodox French and English scientists of the day. Both Coleridge

and Wordsworth showed themselves acutely aware of the need for an entirely fresh outlook on the question of the aesthetics of form, and both looked to the new science of the day, as they understood it, to furnish a basis for this. They found the metaphor they were seeking — that of organism — but, despite this, both ultimately remained tied to the old classical theories of formal aesthetics. It was not until the establishment of Darwinism that a break with the old ways of thought and an entirely new theoretical basis could be achieved in the aesthetics of form.

Much besides the Origin of Species, of course, contributed to the fresh commencement made in aesthetics. One of the greatest factors was the collapse of the old world-picture associated with Paleyism, and the consequent crumbling of the foundation of the old absolutist-oriented aesthetics that went with it. But with this, and with the gradual decay of the vitalism that had enabled the Romantics to effect a temporary coalition between science and art, and by the shift with Darwinism from attempts at devising a set of rigid classificatory principles to the admission that species were less markedly discrete than had formerly been thought, the ground was cleared for the institution of relativistic aesthetics based on the two great achievements in research of the century. These were of course, organicism and evolutionism — the study of the internal economy of the individual and its relations with the web of biological life, and of the evolution of the race. Now, for the first

time, it became scientific orthodoxy to treat the operations of nature as autonomous. The change this implied for aesthetics is apparent if we recall the remarks of Roger Fry in his edition of Sir Joshua Reynolds's Discourses, mentioned in Chapter IV.

Aesthetics made use of organicism as the Romantics had done, both directly, as a metaphor, and indirectly, through physio-psychological studies. With evolutionism, it followed a similar course. The metaphor of development was applied directly to art works, to show them as parts of one autonomous self-consistent growth, and, additionally, the psychological aspects of art-experience were treated from an evolutionary standpoint. In all this, formal studies, the major object of the aesthetic and scientific enquiry of the century, were given pre-eminence.

It is a considerable step from the traditional and conservative-scientific ways of thinking in aesthetics, as exemplified by men like Ruskin and Eastlake, to the radically altered views of Vernon Lee, James Sully, Grant Allen and Roger Fry. Yet the foundations for this development were laid at the beginning of the century in the thought of the Romantics on organicism. Throughout the period, as we consult the works of the more considerable aestheticians — with the possible exception of the Academicians who followed the Reynolds tradition — we are strongly aware of the repeated tendency to look to the natural scientists, whether avant-garde, or, more usually, conservative, for answers to the

leading questions concerning the rationale of form in the arts and in nature. And we find that the principles implemented to provide an explanation of form in the one are assumed to hold good for the other. Briefly, in both natural science and aesthetics we have, at first, a formal theory designed to systematise phenomena in a static, absolutist world, then, a change to one seeking to explain relationship in a relativistically-viewed universe.

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