

EPISTEMOLOGY AND ART

A study of parallels between certain theories of knowledge and certain theories and techniques in Painting and Music.

by

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P R E F A C E

This thesis is a study of certain theories of knowledge in the seventeenth and eighteenth centuries and their parallel similarity in painting and music.

It happens in the thesis that the time marked off by the title goes beyond the time marked off for study i.e. certain theories of knowledge in the seventeenth and eighteenth centuries. This is due to the fact that sometimes the parallelism between philosophical and artistic development does not exist in the same period. For example, it is in the nineteenth century impressionistic school that one finds in art a parallel similarity to British empiricism which blossomed in the latter part of the eighteenth century. Hence when one studies certain theories of knowledge in the seventeenth and eighteenth centuries in Europe and England, he will have to look at certain times beyond the centuries under discussion for a similar tendency in art.

The thesis is composed of four chapters. Chapters One and Three are brief surveys of certain theories of knowledge in the seventeenth and eighteenth centuries. They set a background in the light of which I will show the parallel-

ism between philosophy and certain theories and techniques in painting and in music. Chapter Two is a discussion of music and painting in the seventeenth century. Chapter Four discusses pictorial and musical impressionism.

My most grateful thanks are due to my tutor Prof. RICHARD SCOTT for his valuable suggestions.

ABSTRACT

There is a similarity in the development of philosophy and art. The similarity may not exist between both philosophy and art in the same period. Nevertheless the similarity in their development is a fact proved by a study of both philosophy and art in different periods.

Since my thesis deals only with the seventeenth and eighteenth centuries I shall not find it of any difficulty to give evidence to the existence of the forementioned similarity.

Seventeenth century philosophy was rationalistic. Seventeenth century art was intellectual. Corneille, Boileau, Pope, Rameau, Bach, Poussin - all of these artists looked at art from the intellectual angle. They sought the supremacy of form over the idea. They placed imagination under the control of reason.

Nevertheless the influence of Locke is going to color the physiognomy of contemporary culture. The spirit of toleration is going to dominate. Empiricism is going to play a role in the intellectual life.

The role of empiricism is going to develop in importance until it reaches its zenith in Hume who is going to give it its final implication. According to him what exists is a bundle of impressions.

Impressionism is, in a sense, a return to nature. Before it reaches Humean atomism that tendency is going to start, though indirectly, a tendency in art called romanticism.

The romantic spirit can be described as a return to nature which is considered as an instrument for self-realization. The romantic poet holds the epistemological doctrine that fullness of experience and depth of feeling are the means to understand the real.

This romantic spirit is going to develop until we reach a stage where the artist feels what he feels and senses what he senses and where only these subjective phenomena are the really real.

Impressions are the only realities, and all what exist is a bundle of impressions.

Impressionism is the tendency which characterizes nineteenth century art. A careful study of this artistic tendency will reveal the parallelism in the development of philosophy and art.

The parallelism exists because both philosophy and art are means of expression of human experience and human reactions to experience. They both evolve from the same source i.e. man. If they are different as a means of expression that does necessarily mean that they have different contents. They both involve and resemble each other.

INTRODUCTION

The conviction that there are evident similarities between philosophical and artistic development will be given its 'raison d'être' in the coming chapters where the dominant philosophical tendency of an epoch will be discovered to have a similar tendency in art, particularly in painting and in music.

The first thing to note is that both philosophical and artistic tendencies emanate from the same source i.e. man. The artist is first of all a man with a philosophical, cosmological, and theological outlook of his own. What differentiates him from other men is that qua artist he conceives his problems in a vocabulary of his own, i.e. in pictorial, musical or sculptural terms.¹ And although he may confront the same problems which confront a philosopher, he nevertheless qua artist reacts to them in a manner which distinguishes his interest from that of the philosopher.

Moreover, the artist shares in a bigger order which is society and is influenced by the general philosophical or cultural tendencies prevailing in that order and shaping its collective life. A person shares in the life of an order whenever he tries to realize concretely or actualize whatever he believes is good for the life of the order.

The artist as an active member in society cannot live totally detached from those tendencies which prevail in this

1. Cf. Gerard Petit, l'Art Vivant et Nous (Montreal, 1946), p. 27: "La pensée de l'artiste se meut à sa façon dans l'univers métaphysique, en ce sens que des conceptions métaphysiques conçues en des termes sculpturaux et picturaux.... président au processus de la pensée artistique."

society and which determine its general trend of thought. He either accepts or rejects them. Hence whenever he tries to explain his painting, his music or whatever the work of art is, he can, ultimately, but express a general thought of the period, or suggest a new one which might give impulse for further thought.

The next thing to observe is that there is between philosophy and art a relationship¹ resulting from the fact that both philosophy and art resemble and involve each other. In fact art seems

by implication or by analogy to posit the same problems and to suggest analogous answers to those provided by philosophy.²

This explains why the general thought of an epoch is reflected in its works of art and why the life of artistic thought is dependant upon the life of thought in general.³

Furthermore the practical and the speculative sides are existant in different ways in the same person, who is either the artist or the philosopher.⁴

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1. Cf. Bernard Bosanquet, A History of Esthetics (London, 1949), p. 166: "In a general sense it might be said that criticism from Sydney to Scaliger to Lessing and Winckelmann furnished Esthetic philosophy with its data; while metaphysics from Descartes to Kant supplied it with postulates or a problem. In each of these streams of thought further combinations of tributaries may be said to exist, and between them all kinds of cross-connections."
 2. Irwin Edman, Arts and the Man, (New York, 1949), p. 130.
 3. Cf. Petit, op.cit., p.46: "La dissolution de la pensée artistique suit de près quand elle ne l'accompagne pas la dissolution de la pensée en général".
 4. Cf. Ibid, p.45: "La pensée pratique, qui traverse en son entier le domaine du savoir, entrera souvent, sans quitter son ordre, en interférant avec la pensée spéculative.... 'Est intellectus speculativus, dit Aristote, qui extensione fit practicus'. On s'explique ainsi que, d'une part, les positions métaphysiques entretenues dans l'intellect spéculatif puissent se transporter dans la pensée pratique de l'artiste et de l'homme d'action, et

The artist when he ceases to be merely a gifted and trifling craftsman turns out to be, in his very choice of themes, in his selection of materials, in his total and residual effect, a commentator on life and existence; in his immediate and imaginative way he is a philosopher. The philosopher, constructing through the apparatus of definition and demonstration or of discovery and synthesis, a complete vision of life and existence, is making a canvas of the whole of experience, composing an intellectual symphony, and fabricating a poem, however much his language be prose....¹

que, d'autre part, cette pensée pratique elle-même, traversant en son entier le domaine du savoir, considéré dans son ordre et avec ses propres moyens les réalités ontologiques, les lois essentielles des êtres en général et de la nature humaine en particulier...."

1. Edman, op.cit., pp.112-113

CHAPTER ONE

The Philosophical Situation in the Seventeenth Century

Something must be said about the intellectual atmosphere in general, especially in regard to science and particularly physics, whose discoveries influenced modern thought, before the philosophical situation can be fully understood.

The intellectual atmosphere was dominated by convictions deeply implanted in the European mind and shaping the course of its development. One of these convictions was the "inexpugnable belief that every detailed occurrence can be correlated with its antecedents in a perfectly definite manner, exemplifying general principles".¹ The other one, which was the logical consequence of the first, was the belief in the rationality of the physical order.

If we seek the origin of these convictions we cannot find it except in the Middle Ages. I uphold Whitehead's view that these convictions could not have come from those civilizations whose conception of God were of a being who was either too arbitrary or too impersonal. For in such civilizations "any definite occurrence might be due to the fiat of an irrational despot, or might issue from some impersonal, inscrutable origin of things."² Hence they must have come from the one origin which

1. A.N. Whitehead, Science and the Modern World (London, 1927), p. 15.

2. Ibid., p. 16.

which is "the medieval insistence on the rationality of God."¹

The medievalists believed that the universe is the best possible world.

For God in his infinite wisdom conceived the best of worlds; He could not have created a less perfect world without detracting from his wisdom. To say that God conceived perfection and realized an imperfect world would presuppose an opposition between knowledge and will, between the ideal principle and the real principle of things, which contradicts thought as well as faith.²

This outlook towards the physical order as being ordered and having nothing in it irrational passed down through the Renaissance to the world of modern science. It became in modern science a warranted assumption.³ In fact both the rationality of the physical order and its uniformity are the metaphysical foundations of modern science.⁴ They inspired confidence in the applicability of mathematics to the universe. The key to understanding nature is mathematics working upon the basis of data given by experiment.⁵

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1. Ibid., p.15 see also Merritt H. Moore, Introduction to Movements of Thought in the Nineteenth Century: by G.H. Mead (Chicago, 1949), p.xii: "The rationalism which colours thought since 1600 and which pervades our contemporary scientific period through the assumption of the knowability of nature, and consequently the universality of natural law is rooted in medieval theology"
 2. A. Weber and R.H. Perry, History of Philosophy (New York, 1925), p. 193
 3. Mead, op.cit., p. 7: "The scientists of the Renaissance period having it their major premise that nature is uniform.... They have not proved this premise, but always assumed it in advance. ... If we look for the origin of the concept we find it not in Greek theology but in Christian theology."
 4. Cf. Edwin Arthur Burt, The Metaphysical Foundations of Modern Science (London, 1932), p.58: "The reason why there exists this vast and beautiful mathematical order in the universe is not further explicable for Kepler except by way of the religious aspect of his Neo-Platonism. He quotes with approval the famous saying of Plato, that God ever geometrizes; He created his world in accordance with numerical harmonies, and that is why He made the human mind such that it can only know by quantity."
 5. Cf. Ibid., p.64: "This rigorous necessity in nature results from

"Mathematics the most rational of our disciplines, would fit a rational world."¹

Mathematics become an influence of the first magnitude in the formation of philosophical ideas.² In fact

the greatest philosophers were often the greatest mathematicians. But the wave of empiricistic reaction against the 'innate truths' of the rationalists washed out a gulf between the two studies and they remained sundered until the nineteenth century.³

her fundamentally mathematical character - nature is the domain of mathematics. 'Philosophy is written in that great book which ever lies before our eyes - I mean the universe - but we cannot understand it if we do not first learn the language and grasp the symbols in which it is written. This book is written in the mathematical language, and the symbols are triangles, arches, and other geometrical figures, without whose help it is impossible to comprehend a single word of it; without which one wanders in vain through a dark labyrinth.'" Burt is quoting from the Opere Complete de Galileo, Galilei, Firenze, 1842, ff., Vol.IV, p.171.

1. Mead, op.cit., p.12.
2. Cf. E.S. Kennedy, "Interrelations between Mathematics and Philosophy in the last three Centuries." Reprinted from National Mathematics Magazine, Vol. XVI, No.6, March, 1942, p.2: "The thinkers of the seventeenth century, on the other hand, dealt with axioms no less abstract, but axioms which were drawn from direct observation of natural phenomena. Fortunately for them the fields they chose to study, mechanics for the most part, were readily susceptible to mathematical investigation. Newton's laws of motion, for instance, formed a system sufficiently simple for abstraction yet sufficiently accurate also in its explanation of the movements of things. So the new mathematics really worked. Galileo's marbles rolled down the board just as he had said they would roll; Kepler's planets appeared in the precise spot in the heavens where he had predicted their appearance, and every one was enchanted with the success of it all. If it works in mechanics, said they, why will it not equally work well in all physics, in biology, in the social sciences? So Spinoza wrote Ethics with a geometrical precision, and Q.E.D. after each theorem. People became imbued with a boundless faith in the methods of mathematics."
3. Ibid., p.5. See also A.E. Taylor, "Modern Philosophy." European Civilization its Origin and Development. Directed by Edward Eyre. Vol.VI. London, 1937, p.1219: "Two notable consequences are that from this period (i.e. The wave of empiricistic reaction) "begins the inevitable but unfortunate isolation of the philosophers, who are inquiring into the problem of the limits and certainty of knowledge, from the scientific men, who concern themselves more and more exclusively with enriching our acquaintance with specific facts, and that the problem of the validity

It was with these convictions at its metaphysical foundations that modern science stressed the value of observation and experimentation. They are the motive power of research and investigation. Thus when the scientists wanted to prove why they believed something, by showing how they had come to believe it, they had, already, assumed a metaphysics which they considered as logically prior to the how and the why, namely the rationality of the physical order and the uniformity of its occurrences.

Galileo drew upon this conception of the absolute rationality of the physical order, that is, the view that everything that happens can be explained. The assumption which he used was that God worked through natural forces. As an infinitely rational being he must act uniformly in accordance with what Galileo calls "the rational law of nature," and he must act in a most perfect fashion, i.e. in a mathematical fashion.¹

He suggested a theory of universal mechanics by creating a physico-mathematical science of nature which is capable of foreseeing phenomena. He believed that mathematics is the sole language capable of reading the book of nature.

According to his physics, which "mathematical reasoning applied to its basic assumption and controlled experiment had verified,"² nature is to be conceived as a system of brute matter, or material substances, located in a public, mathematically postulated, and physical space and time. These material

of knowledge itself is increasingly confused with the different problem of tracing the history of its growth. Psychology tends to become the central interest of the philosophers and, as the consequences of their psychological assumptions are steadily worked out, they become more and more doubtful whether we really know anything worth speaking about with certainty; the scientific specialists meanwhile tried, in a kind of blind faith, to add one piece of fresh information to another without concerning themselves about the soundness of the whole structure."

1. Mead, op.cit., p.6.

2. F.S.C. Northrop, The Meeting of East and West (New York, 1947), p.74.

substances are devoid of all the aesthetic qualities. Thus whatever qualities we perceive in them belong to the observer, for were the observer removed these qualities would remain nothing else than mere names.¹

The aesthetic qualities are "epistemologically", "causally", and "existentially" subjective.² The material substances i.e. gross objects and also unobservable exceedingly small particles termed atoms are, on the other hand, "epistemologically objective".³ They are there in a physical space and time.

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1. Cf. Galilei Galileo, *Opere*, IV, 336, ff. As quoted by A.E. Burt in the Metaphysical Foundations of Modern Science, p.78: "But that external bodies, to exite in us these tastes, these odours, and these sounds, demand other than size, figure, number, and slow or rapid motion, I do not believe; and I judge that, if the ears, the tongue, and the nostrils were taken away, the figure, the numbers, and the motions would indeed remain, but not the odours nor the tastes nor the sounds, which, without the living animal, are anything else than names, just as tickling is precisely nothing but a name if the armpit and the nasal membrane be removed;.... and turning to my first proposition in this place, having seen that many affections which are reputed to be qualities residing in the external object, have truly no other existence than in us, and without us are nothing else than names; I say that I am inclined sufficiently to believe that heat is of this kind, and that the thing that produces heat in us and makes us perceive it, which we call by the general name fire, is a multitude of minute corpuscles thus and thus figured, moved with such and such a velocity;.... But besides their figure, number, motion, penetration and touch there is in fire another quality, that is heat - That I judge is so much due to us that, if the animate and sensitive body were removed, heat would remain nothing more than a simple word."
 2. See Lovejoy, The Revolt Against Dualism (New York, 1930), Chap. III, The Second Phase: Objective Relativism, pp.95-100: "An experienced datum is considered as epistemologically subjective if it is not assumed to possess any intrinsic quality or relation which the intended object of knowledge has within its spatio-temporal limits."... "It is considered as causally subjective when it is the consequence of a percipient event in me."... "It is existentially subjective when it is only while I am perceiving it."
 3. Loc.cit.

Moreover, it is because of the metaphysical reality of a physical space and time, and the material substances located therein and whose esse is independent of the percipi of any observer that we have a public world the same for everybody inspite of the qualitative differences which arise from perception; and it is, precisely, due to these qualitative differences arising from perception that we consider the aesthetic qualities as "epistemologically subjective."¹

Newton went further than Galileo in stating that not only the aesthetic qualities are mere appearances, but that sensed space and time have the same character and status. Thus one must distinguish between the perceptually apprehended object in perceptual space and time, and the postulated unobservable physical object in public space and time. The material substances are located in this mathematically postulated physical space which is the same for all observers since it does not change with their standpoints or perspectives.

At the very beginning of his Principia Newton notes

I do not define time, space, place, and motion as being well known to all. Only I must observe that the common people conceive these qualities under no other notions but from the relation they bear to sensible objects. And hence arise certain prejudices, for the removing of which it will be convenient to distinguish them into absolute and relative,

1. Cf. Northrop, op.cit., p.78: "It is because they are not intrinsic properties of the public physical objects in the public world, but rather are dependent in part upon the latter and in part upon the observer, that they are termed by Galileo and Newton 'apparent' rather than 'real' things. It is because of the dependence upon the observer also that it follows, as Galileo asserts, that were the observer removed sounds, colours, odours, and warmth would not exist."

true and apperent, mathematical and common.¹

This "scientific materialism", i.e. "the fixed scientific cosmology which presupposes the ultimate fact of an irreducible brute matter spread throughout space in a flux of configurations,"² and hence the dualism of "perception and matter",³ had a great influence on philosophical thought. In fact all modern thought from Galileo to Kant is "entirely coloured in its development by the acceptance of scientific materialism at its face value."⁴ "Every philosophy", says Whitehead, "was bound in some way or other to swallow it."⁵ It gave rise to a philosophical polemic which was responsible for rational subjectivism and British empiricism. Thus when Bertrand Russell says that

The chief thing that happened in the seventeenth century, from our point of view, was the divorce between perception and matter, which occupied all philosophers from Descartes to Berkeley, leading the latter to deny matter, while it had in effect, led Leibnitz to deny perception,⁶

he is stating the consequences of scientific materialism.

It is interesting to note that if modern science as exemplified in Galileo and Newton, stimulated on the continent of Europe a movement to rationalistic philosophy and in Britain a movement to empirical philosophy it is because the continent looked back to Greek rationalism while Britain had largely provided the

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1. Isaac Newton, Principia (Berkeley, 1934), p.6. as quoted by Northrop, op.cit., p.78
 2. Whitehead, op.cit., p.20
 3. Bertrand Russell, The Analysis of Matter (London, 1927), p.156.
 4. Whitehead, op.cit., p.22
 5. Ibid. : "The revival of philosophy in the hands of Descartes and his successors was entirely coloured in its development by the acceptance of scientific materialism at its face-value."
 6. Russell, op.cit., p.156.

nominalistic opposition to scholasticism. Modern science by pointing both ways, i.e. in its double emphasis upon the clear precision of mathematical reasoning and ^{upon} observed facts or experience, gave a challenge to epistemology to determine the origin of knowledge.

Most, if not all, of the philosophers living in the age under consideration, were aware of the value of observation. Descartes himself, the founder of modern rationalism, loved to study the great book of the world; "and for any one to oppose him to Bacon on this point is sheer ignorance."¹ The philosophers were not questioning the value of experience but rather the origin of ideas of extension, form, and number and the conscious sensation of aesthetic qualities. The point is to try to demonstrate that these ideas are either the evolution of consciousness alone i.e. innate, or they are transmitted to the mind by the action of outward stimulae. Thought was confronted with an either-or. Some philosophers solved the problem by advocating a rationalistic philosophy; others solved it by supporting an empiricist thesis.

Descartes, "the first man of high philosophic capacity whose outlook is profoundly affected by the new physics and astronomy,"² adopted the first solution. He believed that there is no mental modification whatever in our consciousness which is not innate.

But it is not innate in the sense of being actually developed, or an actual modification of consciousness; innate only in the sense of being a potentiality capable of development into

1. Weber and Perry, op.cit., p. 245

2. Bertrand Russell, A History of Western Philosophy (New York, 1945), p.557.

a form of consciousness, yet waiting certain conditions ere this takes place.¹

The conditions are the external stimuli which do not create ideas and sensations, but rather provide the occasion for their origination.

He believes that due to the separation of mind and matter, there is no interrelation between them; nevertheless, the mind is presented with a continuum which acts as an external stimulus. Were it not for this continuum acting as an external stimulus no ideas of extension or conscious sensations of aesthetic qualities would be possible. Thus this continuum precedes conscious sensation of aesthetic qualities and, hence, lies wholly beyond consciousness. Yet, it plays a role in knowledge by acting as a stimulus. It projects certain 'organic' impressions whose

influence ceases at the threshold of consciousness, and when their action is completed, there originate in the mind out of its own nature the conscious idea of extension, and the conscious sensation of colour and sound. These ideas and sensations are the forms of a new and independent power, which arise simply on occasion of external stimuli, but which these stimuli serve in no way to create.... There is another class of mental modifications.... These are not 'perceptions' or 'sensations'. They are 'truths' or 'common notions' or general principles - such as the law of substance and quality and non-contradiction.... These too are innate potentialities, over and above mere perceptions or sensations. They too become actual in experience

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1. John Veitch, Introduction to The Method, Meditations and Philosophy of Descartes; Tr. by John Veitch (New York, N.d.), p. 57. See also Emile Brehier, "Histoire de la Philosophie" (Paris, 1938), Tome II: La Philosophie Moderne, p. 76: "L'innéisme n'est pas cette doctrine étrange que Locke a voulu refuter, la doctrine d'une expérience interne actuelle et constante de tous les principes de nos connaissances. L'innéité des idées consiste dans la disposition et, pour ainsi dire, la vocation que l'entendement a à les penser; elles sont innées en nous comme la goutte et la gravelle sont héréditaires dans certaines familles."

but unlike sensations they are not immediately preceded by organic impressions.¹

Thus according to Descartes all ideas of primary qualities and all conscious sensations of secondary qualities originate in the mind out of its own nature. Hence all knowledge is derived from the mind and not from the senses.

The conscious sensations of colours, odours, sounds and warmth bring us in contact with the apparent and not with the real. They give us access to the perceptual and not to the physical. The latter, being involved in all its appearances to the senses, cannot be known except by a process of mental inference whose validity is supported by the belief in God's goodness and perfection.

Moreover, this mental inference is determined by the process of the geometrical method which Descartes applied to metaphysics and by means of which he attempted to provide an infallible method for achieving certainty. He resolved to "unite the subjective certainty of consciousness with the clear precision of mathematical reasoning"² and decided to

accept no idea as true which did not force itself upon his reason with the same self-evidence he found in the intuition of his own existence or which could not be deduced from axioms or fundamental certainties by secure logical chains.³

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1. Veitch, op.cit., p.57
 2. Frank Sewall, Special introduction to The Method, Meditations and Philosophy of Descartes; Tr. by John Veitch, p.v
 3. K.E. Gilbert and H. Kuhn, A History of Esthetics (New York, 1939), p.201. See also René Descartes, Discourse on the Method of Rightly conducting the Reason and Seeking Truth in the Sciences, Tr. by John Veitch, p.161: "The first law was never to accept anything for true which I did not clearly know to be such; that is to say, carefully to avoid precipitancy and prejudice; and to comprise nothing more in my judgement than what was presented to my mind so clearly and distinctly as to exclude all ground of doubt."

The cogito, which forced itself upon Descartes's reason with clarity and distinctness, has a double function. First, it gives a type of self-evident proposition. Descartes's argument can be put in these words: The cogito is self-evident because I perceive, clearly and distinctly, the liaison between my thought and my existence. Thus I can consider as true whatever I perceive with the same evidence. "C'est en ce sens seulement que le cogito est le type de tout autre certitude qui pourrait être atteinte"¹

The second function of the cogito in Descartes's system is to prepare this distinction, upon which his physics is based, i.e. that between mind and matter.² In general, the rationalists held that the two, "on the one hand Matter, with its simple location³ in space and time, on the other hand Mind, perceiving, suffering, reasoning, but not interfering, were mutually independent, and God would not let Matter fool Mind, because God was a rationalist Himself⁴

It is important to distinguish in Descartes's philosophy

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1. Bréhier, op.cit., p.71.
 2. Cf. Russell, op.cit., p.564: " 'I think therefore I am' makes mind more certain than matter, and my mind (for me) more certain than the mind of others. There is thus, in all philosophy from Descartes, a tendency to subjectivism and to regarding matter as something only knowable, if at all, by inference from what is known by mind."
 3. Whitehead, op.cit., p.72: "to say a bit of matter has simple location means that in expressing its spatio-temporal relations, it is adequate to state that it is where it is, in a definite finite region of space, and throughout a definite finite duration of time, apart from any essential reference of the relations of that bit of matter to other regions of space and to other durations of time."
 4. Kennedy, op.cit., p.3

his system from his method. Though the former was modified by his successors the latter influenced their thoughts.

Another philosopher of the century, whose speculations inaugurated a new philosophical trend of thought, is John Locke.

Locke was very profoundly affected by Newton's physics. So much so that some say that the Anglo-American philosophy of Newton's physics is that of John Locke. In developing his philosophy, Locke

did not begin with an initial state of scepticism from which he was carried to trustworthy conclusions by logical reasoning. The reason is that, unlike Descartes, he found himself confronted in Newton's physics with an established and experimentally verified theory. His task, therefore, was merely that of systematically developing its philosophical consequences.¹

The difference between Locke's and Descartes's philosophy lies in their interpretation of the origin of knowledge. While the latter believes that reason is the source of all knowledge, the former says that all knowledge is derived from perception or experience.² Locke defines knowledge³ as the perception of relation among our ideas.⁴ These ideas are not rational constitutions. They are rather transmitted to the mind by the action of

1. Northrop, *op.cit.*, p.74.

2. Cf. John Locke, An Essay concerning Human Understanding (Edinburgh, 1819), I, 151: "It suffices me only to have remarked here, that perception is the first operation of all our intellectual activities, and the inlet of all knowledge in our mind...."

3. Cf. *Ibid.* "The perception of the connection and agreement or disagreement and repugnancy of any of our ideas."

4. The reader must note that I am using the word "idea" in the Lockean sense of the term.

external objects.¹

The problem which confronted Locke was the relation between these ideas and their ulterior relatum.

I said that Locke had a knowledge of Newtonian physics; and in accordance with the status of physical science at the close of the century he elaborated a theory of primary and secondary qualities. "The primary qualities are the essential qualities of substances whose spatio-temporal relationships constitute nature. The orderliness of these relationships constitutes the order of nature."²

The mind in apprehending certain occurrences in nature does also apprehend certain aesthetic qualities. These qualities are, according to modern science, in the mind alone. Hence when we perceive bodies as with qualities, these qualities are projected by the mind

as to clothe appropriate bodies in external nature. Thus the bodies are perceived as with qualities which, in reality, do not belong to them, qualities which in fact are purely the offspring of the mind. Thus nature gets credit which should in truth be reserved for ourselves; The rose for its scent; The nightingale for his song; and the sun for his radiance. The poets are entirely mistaken. They should address their lyrics to themselves, and should turn them into odes of self-congratulation on the excellency of the human mind. Nature is a dull affair, soundless, scentless, colourless; merely the hurrying of material, endlessly, meaninglessly.³

1. Cf. Locke, op.cit., p.97: "Whatever idea was never perceived by the mind, was never in the mind. Whatever idea is in the mind, is either an actual perception, or else, having been an actual perception, is so in the mind, that by the memory it can be made and actual perception again. Whenever there is the actual perception of an idea without memory, the idea appears perfectly new and unknown before the understanding."

2. Whitehead, op.cit., p.68.

3. Ibid., pp. 68-69.

The idea whereby we come to know is an appearance which cannot depict the physical object qua physical object in mathematical, absolute space and time. Hence, according to Locke, all knowledge is derived from ideas which, themselves, have their origin in experience. These ideas acquaint us with the object as we perceive it and not as it is in its metaphysical self. Thus "There is more than a discrepancy between reality as it is attempted to be conceived in the metaphysics which Locke accepts and the reality to which our ideas refer us and with which our knowledge is found to be concerned."¹

However we try to disguise or label it, the practical outcome of the characteristic scientific philosophy which closed the seventeenth century is: First, the bifurcation of nature into mind and matter; second, the attribution of primary qualities to matter and secondary qualities to mind; and third, an agnostic attitude towards the physical order.

1. James Gibson, Locke's Theory of Knowledge and its Historical Relations(London, 1931), p.195.

CHAPTER TWO

Painting and Music in the Seventeenth Century.

When Descartes proclaims that reason is the source of knowledge he advocates this sort of 'innatism' where ideas exist as possibilities awaiting extraneous stimuli, not to create them, but to occasion their actualization.

Descartes was the champion of the Age of Reason. Nevertheless, he believed in the value of observation and experimentation. But, while other philosophers believed that observation and experimentation were the source of knowledge, he, himself, believed that they are occasions to stimulate an activity whereby there originates in the mind and out of its own nature ideas of quantities i.e. extension, figure, number; and conscious sensations of qualities i.e. sounds, colours, odours, warmth.

Thus when we say that the seventeenth century is the age of Reason we must not think, as some people do, that its ideal is a stiff, emotionless, and unexpressive character.¹ For, in spite of its attachment to rules and methods the seventeenth-

1. Cf. Roger Peyre, Histoire Générale des Beaux Arts (Paris, 1921), p.506: "Il ne faut pas croire que l'idéal de ce siècle soit une raison froide et composée se perdant dans l'abstraction. Descartes va chercher les bases de sa philosophie première, non, dans les livres, pour lesquels on peut l'accuser d'avoir trop de dédain, mais dans l'étude approfondie de la nature et des hommes."

century character is, in general, expressive. Nevertheless, its expressiveness is different in regard to its origin from the expressiveness we find in the romantic period. This difference we shall discuss in due place in the course of this chapter.

Needless to say, some aestheticians viewed art solely from a scientific and intellectual angle. In fact, they went so far in their fanatic rationalism as to deny any "merit and necessity for versification in poetry," and to declare, "the essence of poetry to lie in the boldness of ideas, of the truth of the picture, and the power of expression."¹ Lanotte Houdar, for example, wrote his odes and tragedies in prose.

Besides this rationalistic tendency in seventeenth-century thought it is important to remark the frequency with which it displays a philosopher, a mathematician, and an artist in one person. This remark supports my conviction that there is a similarity in the development of philosophy and art or a parallelism of method in science and art because when a person is both a scientist or a philosopher and an artist he will use either words or colours and sounds as means of expression of his thought. But when qua philosopher, e.g. in his speculative capacities, he adopts a certain metaphysics in regard to the status of the physical order he cannot logically produce, in his artistic or practical capacities, something which contradicts his thought unless he changes his metaphysical position.

1. Paul Henry Lang, Music in Western Civilization (New York, 1941), p.439.

Thus the fact of the existence of a mathematician, a musician, and a philosopher in one person; and the fact that all intellectual and artistic activities emanate from the same source, i.e. man, gives evidence of the inevitability that artistic activities be coloured by the same trend of thought which pervades the mental atmosphere of the century. As a matter of fact, "l'art épousa l'esprit d'une philosophie appuyé sur la science expérimentale, et tourné vers la possession du monde,"¹ and artistic thought fell within the sphere of influence of the physico-mathematical sciences.

I have tried, in the previous chapter, to show the two main tendencies which dominated seventeenth century thought. The first one was the rationalistic tendency typified in philosophy by Descartes, and the second one was the empiricistic tendency professed by Locke. The former had a great influence on the general thought of the period. On the other hand, the latter's influence appeared fully only in the second half of the eighteenth Century. "It was then backed by all the forms of the time, especially by the

1. Petit, op.cit., See also, Ibid., p. 41: "L'artiste fut emporté par le mouvement général de son époque, par les nouvelles conditions intellectuelles et morales de l'Europe qui exigeait chez l'homme cultivé un savoir vaste et détaillé et dirigeait les esprits moins sur l'aspect traditionnel des notions transcendantes que sur la connaissance physique et mathématique de la nature."

passionate sentimentalism of Rousseau and the less philosophical scepticism of Voltaire."¹

Thus the seventeenth Century was the century of reason, manners, form and clarity. Emotions and imagination were controlled by reason.²

The Cartesian method, and Descartes's principle not to accept anything as true which did not, clearly and distinctly, appear to be so, had a great appeal for his contemporaries. It provided them with what appeared an infallible method for achieving certainty.

Descartes was a mathematician, a physicist, and an artist. He had a special interest in music. His "Compendium of Music" appeared in 1618.³ Moreover, he, like Bacon, had an admiration for poetry, because, he thought, poets have written with ecstasy. Nevertheless, he believed in the supremacy of mathematics and philosophy, both of which he approached with reverence.

1. Bosanquet, op.cit., p.178.

2. Cf. Desmond MacCarthy, "The European Tradition in Literature from 1600 Onwards", in European Civilization its Origin and Development. Directed by Edward Eyre. (London, 1937), Vol. VI, pp.883-884; "The classical age was throughout what it revealed itself to be towards its end and in the eighteenth century and Age of Reason. The scholastic philosopher of the Middle Ages had used reason as the servant of revelation, and in secular matters of custom. In the Romantic Movement reason became subordinate to imagination and passion;.... But for more than a century reason controlled imagination; and during that time works of art were measured and valued according to what was conceived to be a relation to truth as discoverable by reason."

3. Gilbert and Kuhn, op.cit., p.106.

I think that a careful study of the artistic activities of the period will depict to us the influence of the Cartesian mind on his contemporaries and will at the same time reveal the similarity in the development of philosophy and art.

The close connection between Descartes' ideal of clear and distinct thinking and the ideal of order, finish, and coherence for art in such French writers as Boileau, Corneille, and Racine has been noted¹ by many writers.

Boileau, before all others, assimilated poetry to the Cartesian clear and distinct ideas. Reason's yoke, he wrote, has falsely been supposed to hinder verse-making. On the contrary, this rational control far from hindering poetry renders her divine.²

This does not mean that poetry is the product of reason, but rather that those faculties, i.e. imagination and sensibility, which are necessary for poetry must always be under the control of reason.

Tout doit tendre au bon sens...
... Nous que la raison à ses règles engage.³

1. Cf. Emile Krantz, L'esthétique de Descartes (Paris, 1882), Intr. iii, as quoted by Gilbert and Kuhn, op.cit., pp.201-202: "The literary seventeenth century realized at every point the Cartesian Esthetics of which Descartes did not write the first word."

2. Cf. A. De Parvillez et M. Moncarney, La Littérature Française (Paris, 1922), p.416: "Etre fidèle à la raison ou au bon sens, c'est donc pour Boileau une autre forme du principe suprême: Etre naturel et vraie. Et c'en est même la forme qu'il emploie fréquemment:

Que toujours le bon sens s'accorde avec la rime
Aimez donc la raison: que toujours vos écrits
Empruntent d'elle seule et leur lustre et leur prix."

3. Loc.cit.,: "Peut-être y a-t-il dans cette idée qu'il se fait de la raison, faculté suprême et régulatrice, une trace de la

In the seventeenth century, artists as well as literary men emphasized the importance of regular method and considered natural and mathematical science as of chief importance. Thus mathematics, besides being an influence of the first magnitude in the formation of philosophical ideas, had such an influence on artistic thought. Andreas Weickmeister (1645-1708) was a mathematician and a musician. He believed that music is "scientia mathematica".¹

The seventeenth century "arts, especially music, were struggling for equality with the sciences. For to be classified with the sciences meant to be accorded a higher rank"². As a result we have the many codifications which limited the elastic spirit of living art to inexorable rules and definitions. Dogmas were crystallized and recorded. They provided the artist with a method and a form of universal applicability. The form was considered as being prior to the idea. "Even with Pope the main objective was form; the idea was, so to speak, secondary; all that mattered was artistic expression."³

It is, nevertheless, important to note that form in baroque art, especially in instrumental music, does not contribute such a dryness as people think. It is a consequence of the elevation of the soul though, perhaps, not its direct ex-

philosophie Cartesienne. On sait que Boileau, en 1671, avait composé l'arrêt burlesque, où il défend Descartes contre les Aristotéléliens de la Sorbonne et attaque vivement, au nom de la raison et de l'expérience, l'abus qu'on faisait du principe d'autorité dans les sciences physiques."

1. Gilbert and Kuhn, op.cit., p.437.

2. Lang, op.cit., p.442.

3. Ibid., p.517.

pression. Although it sticks to rules, it nevertheless transcends all limitations by evolving by its internal logic. "The counting of measures and the enumeration of modulations are as meaningless in the era as in the music of Schoenberg."¹

Music did not escape the control of reason. As a matter of fact it developed within its own province an artistic will and tendency which was in sympathy with the general trend of culture of the period.²

Rameau, the greatest French musician of the period, declared that his aim was the restoration of reason in music. "Music", he declared, "is a science which should have definite rules - a physico-mathematical science."³ He tried in his "Démonstration du Principe d'Harmonie" to reduce all chords to unity i.e. the tonic.⁴

Que ce principe est merveilleux dans sa simplicité! Quoi! tant d'accords, et tant de beaux chants, cette diversité infinie aux expressions si belles et si justes, des sentiments si bien rendus, tout cela provient de deux ou trois intervalles disposés par tierces dont le principe subsiste dans un son.⁵

1. Ibid., pp. 442-443.

2. Cf. Ibid., p.538: "From every tract, every letter, and every preface we hear the Boethian precept: 'Musicus est qui ratione perpensa'".

3. Cecil Gray, The History of Music (London, 1928), p.160.

4. Cf. J. Combarieu, Histoire de la Musique (Paris, 1946), II, 277: "Le besoin de son esprit, c'était l'unité. Il est arrivé à le satisfaire pleinement à l'aide d'une doctrine très claire qui, aujourd'hui, serait fort éloignée de pouvoir justifier les hardiesses de l'art contemporain, mais qui s'adapte bien à la conception musicale d'autrefois. Cette doctrine, à laquelle il était attaché par une foi profonde et dont la découverte fut pour lui une révélation, il l'a présentée avec un esprit à la fois révolutionnaire et sage, parfois aussi une lenteur de style qui rappellent le Discours de la Méthode. Rameau fait table rase de tout ce qu'on a écrit avant lui sur la théorie musicale."

5. J.Ph.Rameau, Traité d'Harmonie. Livre II, pp.127-128, as quoted by Ibid., p.277.

Moreover, he remained faithful to the Cartesian traditions, to the critique of knowledge.¹

The seventeenth-century music is learned rather than inspired; and I think that nobody can show this more clearly than Bach in his music, especially in his fugues. "On pourrait dire en retournant un mot célèbre de Leibnitz, que la fugue est une arithmétique arrivée à la pleine conscience d'elle-même."²

Bach is extraordinarily learned in his art. His compositions are not the exteriorization of his personal feelings, or the response to the beauty of nature. The sentimentality of Beethoven's Pastoral Symphony is not found in Bach's works. Yet, few would say that his works are dry; and although his art is formal it is nevertheless expressive.

The question which arises is this: How can art be formal and at the same time expressive? This question can be asked about baroque art in general i.e. painting, music, sculpture, etc. How can baroque art be so much controlled by reason, with its rigid rules, and be at the same time expressive?

The point is that rationalistic aestheticians considered beauty as a mathematical construction determined by prescribed rules. They defended the scientific outlook whose kernel, wrote Lord Russell, "is the refusal to regard our desires, tastes, and interests as affording the key to the understanding of the world."³

1. See above p.84, footnotes No.4.

2. Combarieu, op.cit., p.293.

3. Lord Russell, as quoted by Macnile Dixon, The Human Situation (New York, N.d.), p.53.

The artists of the period had a special sympathy for this scientific outlook. They fell under its influence and made of beauty a system of scientific relations.

The thing to note is that in spite of its formality and rigidity, baroque art is expressive. Nevertheless whatever expressiveness it involves, it arises from the logical combinations of the different tonalities, i.e. from the architecture of the music itself, or from the composer's ability to develop in a mathematical way a certain theme; thus from the clarity and the distinctness with which a certain piece of music is written, rather than from the artist himself qua person exteriorizing his personal feelings.

Souvent absent de son oeuvre, l'artiste faisait de la musique comme un architecte ferait des plans de palais ou de maisons destinées à des services très différents, sans songer à se mettre soi-même dans l'édifice conçu; il évoque aussi l'idée d'un ingénieur thaumaturge qui aurait le calme d'un souverain créateur.¹

Hence the expressiveness which we find in baroque art is totally different from the one we find in the rococo art. Whatever pathetic we find in the former comes from the painting or the music, or whatever the work of art is, itself, and not from the artist's inner world or personal feeling.

I think that Bach was the only musician, after Rameau, who has clearly reflected the character of his period.

The mathematical reasoning which we encounter in almost all the parts of his works is a stamp of the epoch; and although some parts of his works reveal a poignancy of emotional expression.

1. Combarieu, op.cit., p.290.

that has no parallel in any music save that of later Beethoven or Brahms, yet, this expressiveness is essentially objective - "It has been intellectually and imaginatively experienced by the composer himself rather than inwardly and subjectively."¹

Bach n'a nul effort à faire pour adapter aux textes de ses cantates ou de ses passions une musique appropriée; un acte simple de bon sens lui suffit.... Rien n'est plus facile que de citer dans les cantates, dans les Passions, dans toutes les œuvres, des traits saisissants de poésie, de pittoresque, de pathétique; mais aucun d'eux n'a une signification analogue à ce qu'on trouvera dans les compositions de Beethoven. C'est de la musique pure, non de la vie personnelle exprimée en musique; c'est de l'imagination soutenue par une sensibilité moyenne et une technique inspirée, non un jeu de passions profondes ou de visions romanesques. On peut aller plus: Avec la langue et les ressources qu'il maniait, il lui eût été plus difficile de faire de la musique inexpressive que de la musique expressive.... Avec sa science sûre, ramenée à une sorte d'infaillible instinct, il y verse la substance d'une pensée sublime et d'un pathétique magnifique. Mais - et c'est cela qui nous paraît spécial à la Renaissance - Ce pathétique vient beaucoup plus de l'art et de l'artiste que de l'homme.... Bach est tellement virtuose, il a une maîtrise si parfaite et si facile, que dans la fugue elle-même il ne peut s'empêcher de mettre habituellement de la fantaisie, de la grâce, de l'expression, de l'éloquence...."²

The search for a rational program took place at much the same time and in much the same way in respect to painting. It was declared to be the function of the new French Academy to find rules for painting that were simple, infallible, and mutually illuminating.

Poussin, Lorrain, and Le Brun insisted on correctness. Poussin's desire to make his art as correct as possible reflects Descartes's influence.³

1. Gray, op.cit., p.148.

2. Combarieu, op.cit., p.295.

3. Cf. Peyre, op.cit., p.620; "'J'ai souvent admiré', dit

Thomas Craven in his book Men of Art, says

Poussin's rythms, examined in the light of Modernist doctrine, are automatic beats, square masses, and horizontal lines, uniformly repeated, curved lines recurring with monotonous and geometrical accuracy.¹

Moreover, the artist, who was subject to the general trend of thought of the epoch, accepted the belief bequeathed from Christian theology, mainly the rationality of the physical order. Thus he believed that the greatest degree of perfection was to be found in the existing universe, every other possible system being as a whole less perfect. This belief was exemplified in philosophy by Leibnitz who believed that there are an infinite number of possible worlds, all of which God contemplated before creating the actual world. He believed that being good, "God decided to create the best of the possible worlds, and He considered that one to be the best which had the greatest excess of good over evil." "Our world is the best of all possible worlds."²

As a logical consequence of this belief the artist,

Vigueul Marville, 'qui connut Poussin dans sa vieillesse, l'amour extreme que cet excellent peintre avait pour la perfection dans son art.'. See also Thomas Craven, Men of Art (New York, 1931), p.414: "By his mental habits, his sterile intellectualism, his mode of living, and by his art, Poussin denied the human side of life - The emotions, feelings, and the everyday experiences out of which the true artist makes his pictures: The life of the senses, so far as it afforded him first-hand knowledge of the passions and actions of man, he sternly ignored, extolling the life of pure thought, of passive reverie."

1. Ibid., p.418.

2. Russell, op.cit., p.589.

who, himself, adopted this same belief, affirmed that the 'imitation of nature' must be the standard and law of art. But, though it is nature that one must imitate, nevertheless, it is nature methodized.

Thus equipped with a method and a knowledge of the fundamental principles of art, the artist went to nature to reproduce its objects according to the most exact appearances. The belief was then that the best painting was the one in conformity with the imitated object; and the goal of the artist was to try to depict, as exactly as possible the verisimilar quantitative and qualitative aspects of the imitated object.

By the side of this realistic tendency, "which made of composition the synonym of observation and of invention the combination of natural forms,"¹ there existed and undercurrent of empirical tendency typified in philosophy by Locke. This undercurrent of empiricism was gradually getting hold of the general trend of thought of the period. As a matter of fact Locke's thought influenced the poet Addison. "It was Locke's method that Addison followed when he wrote his eleven papers for the Spectator on the pleasures of the imagination."²

In general the empiricistic trend of thought manifes-

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1. Cf. Petit, op.cit., p.78: "Ce réalisme servile qui faisait de la composition le synonyme de l'observation, et qui faisait de l'invention la combinaison des formes naturelles avec l'aide de la botanique de l'anatomie et de la physionomie, illustre l'empiricisme mécanique et scientifique de l'époque.:"
 2. Gilbert and Kuhn, op.cit., p.233.

ted itself at this early stage in the aesthetic of the rising rococo. The rococo style was an urge for liberty. It was a reaction against the artistic forms which had become immutable. The rococo art gave priority to feeling, atmosphere, and sensibility in the stead of the rigidity of the baroque art.

Nevertheless, the dominant character of art in the period under consideration is rationalistic and hence pictorial or picturesque rather than empiricistic and hence impressionistic. Art was under the control of reason, and it reflected the Cartesian belief in the correspondence between the ideas in the mind and the external physical objects.

This pictorial character is present in music as well as in painting,¹ and hence seventeenth century music is as pictorial² as the painting of the century.

Thus, the increasing ambition of seventeenth-century artists to make their art as correct as possible and to reduce beauty to a system of logical or scientific relations manifests

1. Cf. Oswald Spengler, The Decline of the West (New York, 1946), I, 220: "The distance separating two kinds of painting can be infinitely greater than that separating the painting and the music of the period."....

"The inner-form language is so nearly identical that the difference between optical and acoustic means is negligible."...

"Considered in relation to a statue of Myron, the art of a Poussin landscape is the same as that of a contemporary chamber-music cantata."

2. Cf. Lang, op.cit., p.325: "The increasing tendency of musicians to underline important words in the text by suggestive melodic and harmonic passages, the play of light and shadow, the expressive utilization of dissonance and chromatic, the echo effects of the double choirs are all pictorial as compared to the more linear-plastic quality of Renaissance music."

the physico-mathematical stamp of the period and shows the parallelism of method, hence the similarities in the development of philosophy and art.

Chapter THREE

BERKELEY and HUME.

The purpose of this chapter is to study briefly the philosophical thoughts of Berkeley and Hume as a background in the light of which I hope to be able to show to the reader the similarities in the development of philosophical and artistic thought, in the eighteenth and early nineteenth centuries.

In order to understand the philosophical thought, of both Berkeley and Hume one has to survey briefly the preceding currents of thought, which gave rise to their Idealism and Impressionism, i.e. Bacon's empiricism, Newtonian physics, and Locke's theory of ideas.

Bacon "is commonly regarded as the originator of the saying 'knowledge is power'.... The whole basis of his philosophy was practical: to give mankind mastery over the forces of nature by means of scientific discoveries and inventions."¹ He was the father of modern positivistic philosophy, in so far as he was "the first to affirm, in clear and eloquent words, that true philosophy and science have common interests, and that a separate metaphysics is futile."²

Moreover, Bacon was a naive realist. This realism i.e. the belief that things are what they seem, led to Galilean

1. Russell, op.cit., p.542.

2. Weber and Ferry, op.cit., p.238.

and Newtonian physics, which, in turn, proved that his naive realism is faulty.¹ Galileo showed in his physics that all the "aesthetic component",² i.e. all the immediatly apprehended colours, sounds, warmth, odours, do not belong to the physical object, or the material substance, in physical or absolute space and time. They are mere names or apparent factors whose existence depends upon the existence of a perceptient and his perception of them.

Newton went a step further. He showed that not only sensed colours, sensed odours, sensed sounds, and sensed warmth are mere appearances, but that sensed space and time have the same status. Hence nature is bifurcated into two realms, the realm of the apparent and the realm of the real.

John Locke was the first person to develop the epistemological consequences of Newton's physics.

We saw that, according to Newtonian physics, the immediatly apprehended aesthetic qualities are mere appearances. They are not constituents of nature at all, since their existence depends upon the presence or existence of a percipient. Hence "apart from eyes, ears, or noses there would be

1. Cf. Bertrand Russell, An Inquiry into Meaning and Truth (1946) p.16.: "We all start from naive realism i.e. the doctrine that all things are what they seem. But physics assures us that the observer, when he seems to himself to be observing a stone, is really, if physics is to be believed, observing the effects of the stone upon him. Thus science seems to be at war with itself; when it most mean to be objective, it finds itself plunged into subjectivity against its will. Naive realism leads to physics, and physics, if true, shows that naive realism is false."

2. Northrop, op.cit.

no colours, sounds or smells."¹

Locke, writing with a knowledge of Newtonian physics, elaborated, as we have seen in a previous chapter, a theory of primary and secondary qualities. Secondary qualities, he believed, do not belong to the physical object in absolute and mathematical space and time. They are qualities of the mind alone; "they are only in the percipient."² Hence they are 'epistemologically', 'causally' and 'existentially' subjective.³

Primary qualities, on the other hand, are the essential qualities of substance whose spatio-temporal relationships constitute the order of nature.⁴ They are epistemologically objective.

That which faced Locke, as a result of his acceptance of Newtonian physics and its two independent substances, was the fact of knowledge. Man does know. How is knowledge at all possible? Locke answered this question in a way which gave rise to another question. He said that knowledge is mediate. But what is the character of this mediating factor, i.e. the idea?

Locke believed that the mind was a tabula-rasa, which, when the primary qualities or the physical object in physical space and time, acts upon it, becomes conscious of a specific particular simple impression or idea. But without the senses

1. Whitehead, op.cit., pp.67-68.

2. Russell, History of Western Philosophy, p.606.

3. See above, p.8, footnote 2.

4. Whitehead, op.cit., p.68

there would be no interaction between mental and material substances and no knowledge would ever take place. Thus the senses offer us knowledge in so far as they provide us the contact between mind and physical object, which gives rise, in the mind, to a sensation or idea. This idea is that whereby we know and that which we know.¹ It is that whereby we know since knowledge is mediated; and it is that which we know since we cannot go beyond it to know "l'être intime" of the physical and the mental substances, in physical space and time.

The fact that we are constantly limited to our ideas makes us question the existence of an ulterior relatum and its being ever known as such by the percipient.

It is important to note at this stage of the argument that Locke "has never really placed himself at the point of view of subjective idealism. He has assumed from the start that ideas are signs, which point beyond themselves to a realm of real being distinct from them."² Nevertheless, this assumption was shaky since it is not clear whether ideas are only signs

1. Cf. Taylor, "Modern Philosophy", op.cit., p.1221: "There is a further unhappy ambiguity in Locke's use of the word 'idea' which involves him in grave difficulties. According to his own definition an idea is whatever is the immediate object of a man's mind when he thinks. Strictly this should mean that God, the mind of our fellow men, the bodies around us, are all 'our ideas', since they are all at one time or another objects of our minds when we think. But Locke has also taken over from Descartes the very different view that an idea is also a mental fact, a state of mind, and he is wedded to the belief in representative perception. He is never alive to the impossibility of holding both that any ideas are the objects about which I think and that they are 'resemblances', or mental copies, of these objects."

2. Gibson, op.cit., p.172.

whereby we know, or all that which we know. Besides, the fact that we are limited to ideas, beyond which we cannot go directly, challenges Locke's assumption and questions the validity of his reasoning.

The idea is, according to Locke, in the mind. But if we are limited to our ideas, which are determined by the position of the observer in a certain perspective, how do we know that there is a material object?¹ And are we, really, not presupposing a material substance when we say that ideas result from the affection of a material object, which we cannot immediately experience, upon an entity which when acted upon becomes conscious of these material objects as appearances? Besides, what is this material substance which we cannot know since we are limited to our ideas.

All this and the fact that

Locke tends to confuse the general problem of our knowledge of the existence of a material universe and its relation to the mind, with the more limited problem of determining the manner in which, and the extent to which, we can be assured of the existence of particular things within this universe, the reality and general nature of which are tacitly assumed,²

since he does not explain how we do come to know the material universe in absolute space and time where we are limited to our ideas, makes me come to the conclusion that Locke's attempt to avoid subjective idealism was a failure. It took a philosopher like Berkeley to show this.

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1. Taylor, op.cit., pp.1221-1222: "How, if the objects of the mind whenever it thinks are all 'ideas', I can ever come to think of some of these objects as copies of things which are not 'ideas', and to know that the copies are exact, Locke never explains."
 2. Gibson, op.cit., p.173.

According to Locke, the physical object as such cannot be known to us, since we cannot come to know anything except by the aid of simple impressions, or association of such impressions or ideas. These ideas are atomic, spontaneous, and transitory in sensed space and sensed time. All knowledge is derived from them; all knowledge is limited to them; hence all knowledge is of them though not about them.

This Lockian theory of ideas was led to its logical consequences in the philosophy of Berkeley and Hume.

Berkeley noted that the ideas given through the senses are particular. What we sense is this particular blue and not the class concept referring to all blues. Nevertheless, particular ideas may acquire a general significance, by representing to the mind all the other particular ideas resembling them,¹ and, since according to Locke, all our ideas are simple ones, then there are no 'universals' or 'class-concepts', and all the mind's ideas are particular, simple ones.

Moreover, since we are limited to these particular, spontaneous, and simple ideas, we, therefore, cannot go beyond them to apprehend the metaphysical reality of the physical

1. Cf. André Joussain, Exposé Critique de la Philosophie de Berkeley (Paris, 1921), p.4: "Nous usons, il est vrai, des mots qui sont des signes généraux. Mais contrairement à ce que croit Locke, si le mot devient général, ce n'est pas parcequ'on en fait le signe d'une idée générale abstraite; c'est parcequ'on en fait le signe de plusieurs idées particulières qu'il suggère indifféremment. Ainsi nous ne nous représentons jamais que le particulier. Toutefois les idées particulières peuvent acquérir une signification générale, en représentant à l'esprit toutes les autres idées particulières de la même espèce."

object as it is conceived by Galileo and Newton. Hence the physical object of Newtonian physics becomes meaningless.

If man cannot come to know anything except by the aid of the idea or the association of ideas, and if all that one can mean by anything is either a datum or an association of sense data, then by the principle of parsimony there is no justification for positing anything beyond ideas and their associations. Hence the physical object is, accordingly, a bundle of sense data. For "what evidence have we that that which causes the impressions has any other character than what is given in our experience."¹ Thus what one must mean by a material substance or physical object is the directly observed sense impressions themselves. In fact "the concept of 'thing' or 'substance' adds nothing to the perceived qualities and is unnecessary."²

Berkeley rejects Locke's and Descartes's belief that the idea is an exact copy or image of an ulterior relatum;³ for, he considers, that only an idea can resemble another idea.

If an idea is a state of the mind or in a mind, it can 'resemble' nothing but another state of mind; another idea. There can be no resemblance of any idea to an extra-

1. Mead, op.cit., p.33.

2. Cf. Russell, op.cit., p.654: "Things as we know them are bundles of sensible qualities: a table, for example, consists of its visual shape, its hardness, the noise it emits when rapped, and its smell (if any). These different qualities have certain contiguities in experience, which lead common sense to regard them as belonging to one 'thing', but the concept of 'thing' or substance adds nothing to the perceived qualities, and is unnecessary."

3. Cf. Bréhier, op.cit., p.346: "On se rappelle que, pour Locke (comme pour Descartes), les idées sont représentatives; ce

mental reality which is ex hypothesi not in the 'mind'. Since the whole of the perceived natural world is a complex of 'ideas in our minds', it is senseless to talk of another unperceived nature as its cause and aretype."¹

Thus

when we do our utmost to conceive the existence of external bodies, we are all the while contemplating our own ideas. But the mind taking no notice of itself, is deluded to think it can and does conceive bodies existing unthought of or without the mind, though at the same time they are apprehended by or exist in itself. A little attention will discover to any one the truth and evidence of what is here said, and make it unnecessary to insist on any other proof against the existence of material substance.²

Hence following the expression of Condillac: "Ce ne sont jamais que nos propres pensées que nous apercevons."³

Thus by developing Locke's theory of ideas to its logical consequences and by reducing the physical object into a collection of sense impressions in sensed space and sensed time, Berkeley was attacking Newtonian physics and, at the same time, refuting Locke's theory of primary and secondary qualities. He pointed out that the same arguments which we apply to secondary qualities are applicable to the primary ones.

Berkeley's philosophy points out two essential thesis. A nominalistic thesis and an idealistic one. The nominalistic thesis is this: The material substance is no more than a collection of sense impressions; and these directly apprehended sense impressions or sensed qualities are in every case particular. The idealistic thesis is that whatever we perceive is

sont des copies ou images d'une réalité extérieure; Thèse absurde puisqu'il est intuitivement évident que seule une idée peut ressembler à une autre idée."

1. Talyer, op.cit., p.1224.

2. G. Berkeley, Works, ed. by Frazer, (Oxford, 1901), I p.270.

3. Etienne B.de Condillac, Connaissances Humaines, as quoted by Joussein, op.cit., p.44.

an object-of-consciousness and an object-of-consciousness does not exist apart from that consciousness.

This second thesis is rather important. For, once it is recognized that the mind is all the while contemplating only ideas, beyond which it cannot go directly, it becomes self-evident that the idea of a material substance which is contemplated by mind but which is not an idea is a contradiction.

Thus, according to Berkeley's thought, mind and its ideas are the only absolute realities, and ideas in sensed space and time are really real. They are when they are perceived. Hence all ideas are the product of some mind or other. Does it mean that the universe cease to exist when we cease to perceive it? And if we are all the while contemplating ideas, how do we then distinguish between what we perceive and what we imagine?

As far as the first question is concerned Berkeley shows that the fact that sensations impose themselves upon us, and do not depend upon our will, proves that there is another will that produces them; a more powerful spirit that imposes them upon us and ^{in or for} whose mind they exist when not perceived by us.¹ This will is God; and "the unity of nature is the unity of ideas in the mind of God."² Hence our apprehension of ideas makes us also apprehend the connection, the relation, and the

1. Berkeley, op.cit., p.452.

2. Whitehead, op.cit., p. 85.

order of all the parts of the universe, discover its unity and participate in divine unity. Thus the activity of our intelligence is a perpetual participation in the divine unity always in act.¹

Berkeley answers the second question by saying that ideas have objective existence if they are "connected and of a piece with the preceding and subsequent transaction of our lives."²

Parenthetically, it is interesting to note the similarities existing between some of Berkeley's thought and Romanticism. His sensualism which makes him the philosopher of the epoch and which relates him to Locke and Condillac, is in reality but one aspect of his tendency to repudiate abstract ideas. It is also of great significance to note in this respect that he considered it possible for a person, endowed with ample and strong imagination to arrive at a full knowledge of all the reality without the aid of signs.³

Joussain comments on this by saying

On ne peut s'empêcher ici de songer à Victor Hugo, dont la pensée est devenue philosophique à force de vouloir embrasser par l'imagination la totalité des choses.⁴

Berkeley is romantic in his sincere love of nature.

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1. Cf. Joussain, op.cit., p.12: "En prenant conscience de ces idées, nous saisissons la connexion, la relation, et l'ordre de toutes les parties de l'univers; nous lui imposons ainsi l'unité, et participons à l'unité divine. Ainsi l'activité de notre intelligence est une participation perpétuelle à l'intelligence divine toujours en acte."
 2. Berkeley, op.cit., p.452.
 3. Cf. Berkeley, op.cit., p.57: "Certainly it is not possible but a man may arrive at the knowledge of all real truth as well without as with signs, had he a memory and imagination most strong and capacious."
 4. Joussain, op.cit., p.234.

This love which reminds us of Jean-Jacques Rousseau, becomes more apparent and sensible in Berkeley's thought when he proves God's existence and declares that "the unity of nature is the unity of ideas in the mind of God."¹ Does not this conception induce man to surrender completely to nature in order to intuit ideas and hence participate in divine unity? Does it not remind us of the romantic poet who conceived nature as an instrument to be used for his self-realization? And can we not see that, according to Berkeley, a complete surrender to and union with nature is an evident union with God?

To come back to the main argument I would like now to give a brief survey of Hume's thought.

While Berkeley "banished the conception of substance from physics, Hume banished it from psychology."² We saw that the facts of Galileo's and Newton's physics gave rise, when it distinguished between sensed space and sensed time and public, physical objects in absolute, mathematically postulated space and time, to the concept of material and mental substances. The problem which faced Locke was the relation between them. This he resolved by his theory of ideas.

Berkeley showed that according to Locke's theory of ideas the notion of substance as something not immediately experienced is meaningless.

Hume carried Locke's theory of ideas still further. He showed that upon its assumptions nothing exists but a succession

1. Whitehead, op.cit., p.85

2. Russell, op.cit., p.662.

of particular, transitory sense-data and their particular association. Certain of these association are what we must mean by a mind, others what we must mean by a material object. Hence there is no ground for asserting the existence of either material or mental substance. "There is", he says, "no impression of self, and therefore no idea of self."¹ Thus with Hume the concepts of material or mental substances, become mere names, "short-hand ways of talking about nothing but sense-data and their sensed relations,"² in sensed space and time.

By reducing everything to impressions or association of impressions in perceptual space and time, Hume has, at the same time, dropped geometrical perspective. For it has no point unless one desires to derive "the optical image from the solid shape of a body and from one's location relative to the body".³ Hence everything becomes given only two dimensionally.

This is, in brief, the philosophical situation at the end of the eighteenth century. The study of impressionism, in

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1. Russell, *loc.cit.* see also David Hume, Treaties of Human Nature (Oxford, 1946), Book I, Part IV, Sect. VI, p.252: "For my part when I enter most intimately into what I call myself, I always stumble on some particular perception or other, of heat or cold, light or shade, love or hatred, pain or pleasure. I never can catch myself at any time without a perception and never can observe anything but the perception.... But setting aside some metaphysicians...., I may venture to affirm of the rest of mankind, that they are nothing but a bundle or collection of different perceptions, which succeed each other with an inconceivable rapidity, and are in a perpetual flux and movement."
 2. Northrop, *op.cit.*, p.116.
 3. Hermann Weyl, Philosophy of Mathematics and Natural Science (Princeton, 1949), p.113. Italics are mine.

the next chapter, will reveal to us the similarity in the development of philosophical thought at the second half of the eighteenth century, and artistic thought at the beginning of the nineteenth century.

Chapter FOUR

Impressionism in Painting and in Music.

Due to a striking correspondence existing between empirical atomism and pictorial and musical impressionism one is encouraged to say that the history of impressionism has its germs in Bacon as its initiator; its theoretical formulation in Hume as its systematizer, and its practical manifestation in impressionist painters and musicians as its exponents.

This movement of thought, which dominated the second half of the eighteenth and the first part of the nineteenth centuries, found in Bacon its initiator in so far as he repudiated all formalism and arm-chair speculation to rely on the one book of nature which he thought he could master by means of sincere obedience to and careful receptivity and systematized classification of all that nature gives him through the sum total of his experiences and observations. Bacon's aim was not edification but rather a precise catalogue of all of nature's constituents. In order to achieve such a catalogue man must leave his refuge and go out into the open air equipped with his senses.

In so far as he advises us to rely on the sum total of our experiences and observations, to obey nature and to leave our refuge and go out into the open air, Bacon started the empiricistic movement which culminated in Hume and initiated both emotional naturalism, which found its exposition in Rousseau-

istic romanticism, and impressionism, which "has itself chosen the word Plain-air (Freilicht) to designate its special characteristic,"¹ since it can no more endure the limitations of the studio than Bacon can accept the rigidity of scholastic formulae and book learning.

One needs to write a whole history of Physical Science and another history of the development of modern philosophy from Bacon to the present to show that the empiricistic movement bears in its bosom the seeds of Dualism - epistemological and psycho physical, - Humean scepticism, agnosticism, and impressionism. Nevertheless, I have tried to support this statement by the brief summary in the preceding chapter.

This movement which Bacon initiated required that the theory of reality should be derivative from what individual feeling or sense-perception was supposed to announce. It had its full influence in the second half of the eighteenth century, though it had previously existed as an undercurrent in seventeenth-century rationalism.

I have in a former chapter tried to show, briefly, the essence of Descartes's philosophy; and it is needless to repeat what I have said before. Nevertheless, I would like to say that, as far as its life is concerned, Cartesian rationalism dated until 1730.

At the beginning of the eighteenth century a sort of a Cartesian orthodoxy still reigned in the educational program of

1. Spengler, op.cit., p.288

all the countries. But by 1730 it was repudiated. England was the first to abandon it. In Scotland it lasted until 1715 only.¹

On the other hand the influence of Locke, who was the "first person to develop systematically the philosophical consequences of modern science,"² as exemplified at the time in Newton's physics, was already strong enough at the beginning of the eighteenth century.³ Nevertheless, it was not until the second half of the eighteenth century that empiricism reached its full implication and, hence, its logical conclusions and, in a sense, permeated the whole physiognomy of contemporary culture.

This empiricistic, positivistic, and anti-metaphysical philosophy, by urging emancipation from the absolutism of reason, its rigid rules and formulae, and by establishing in its stead the validity and value of experiences and observations in regard to the origin of knowledge, revolted against the analytical intellect, repudiated the imitation of a preconceived

1. Cf. Bréhier, *op.cit.*, pp.312-313: "Je crois, (écrit Reid le 24 Août 1787) en parlant de James Gregory, professeur à l'université de St. Andrews, qu'il fut le premier professeur de philosophie à enseigner la doctrine de Newton dans une université d'Ecosse; car le système Cartésien était le système orthodoxe à cette époque et continua à l'être jusqu'en 1715." Et Voltaire, qui avec Maupertuis fit tant pour répandre l'esprit Newtonian en France considère l'année 1730 comme la date de son succès définitif: 'Ce n'est guère, écrit-il, en songeant à la philosophie de Descartes, que depuis 1730, qu'on a commencé à revenir en France de cette philosophie chimérique, quand la géométrie et la physique expérimentale ont été plus cultivées.'.... "Plus tard, en 1733, Holland pouvait écrire de la philosophie de Descartes: 'A peine en trouverait-on aujourd'hui des sectateurs.'"

2. Northrop, *op.cit.*, p.71.

3. Cf. Bréhier, *op.cit.*, p.319: "La diffusion des idées de Locke est déjà fort grande au début du XVIII siècle."

cosmos to believe in experienced nature, and forwarded subjectivistic sentimentalism which culminated in the spontaneous and atomic Humean impressionism.

Besides, this movement was supported by the individualistic and materialistic tendencies of the epoch which were reflected in all the domains of human activities. It counselled man not to seek beyond the sensible.

I said a minute ago that this movement of thought permeated the physiognomy of contemporary culture. In fact the aestheticians as well as the men of letters developed in this epoch a conception of art and life which is centralized in sentiment, in the humanly subjective. "The message of the epoch can be summed up once for all in the exclamation of Faust - 'Feeling is all.'"¹

L'Abbé Dubos, writing along this line of thought says

Que ceux qui n'ont jamais aimé, écrit Dubos, se tiennent pour dit, quelque supériorité d'esprit qu'ils aient, qu'il y a une infinité d'idées, je dis d'idées justes, auxquelles ils ne peuvent atteindre et qui ne sont réservées qu'au sentiment....²

Moreover, in another passage he says

Le raisonnement ne doit intervenir dans le jugement que pour rendre raison à la décision du sentiment; notre coeur s'agite de lui-même pour un mouvement qui précède toute délibération.³

In Italy Vico was influenced by Bacon to find individual experiences rather than general ideas at the basis of knowledge. He believed in the value of sentiment or sense impression as the source of knowledge.

1. Irving Babbitt, Rousseau and Romanticism (Cambridge, 1919), p.115.
Footnotes 2 and 3 are indirect quotations by Petit, op.cit., pp.156-157.

L'Abbé Dubos believed that a "sixth sense in us answers by a reflex movement and without deliberation to the touching imitation of natural objects. People call this sentiment, or the heart; and it is just for this response to the beautiful that the heart is made."¹ Diderot refuted this belief, which was also held by Lord Hutcheson, "that aesthetic experience belongs to a sixth sense and said that it stemmed from the same simple seeds as any kind of knowledge,"² i.e., sense perception.

Nevertheless, it is important to note that this empiricism, which streamed from Bacon and which trusted the first deliverances of the ordinary senses as the foundation of knowledge, was not exempt from misinterpretation and vulgarization. In fact 'feeling' was interpreted as 'pleasure' and 'sentimentality' confused with 'sensuality'. "Pleasure and not conformity to rules, 'says Dubos,' is the first consideration in one's approach to art;"³ and "sensuality is the supreme aesthetic value," echos Herder. "Sculpture serves first lust."⁴

But this movement of thought, which was subject to vulgarization and misinterpretation, resulting from the elastic use of the word 'sentiment' or 'feeling', was essentially naturalistic. Batteux announced that he had reduced all arts to a single principle i.e., the imitation of nature. It was an imitation of that to which we surrender ourselves for self-

1. Gilbert and Kuhn, op.cit., p.276.

2. Ibid., p.281.

3. Ibid., p.276.

4. Ibid., p.312.

realization. This was the metaphysical doctrine of 'Rousseauistic Romanticism'¹ or 'emotional naturalism'². That which we must imitate is nature as we feel and perceive it, and not the methodized and, in a sense, preconceived nature of Classicism.

Nature is ontologically real, and we must approach it equipped with our senses, which are the channels by the aid of which we observe and experiment.

Moreover, this empiricistic movement was at its beginning realistic; and I have already mentioned before that this naive realism, exemplified in Bacon, has led to Galileo's and Newton's physics whose philosophical consequences i.e. epistemological and psychophysical dualism, and agnosticism, have been systematized in Locke's essay.

But the outcome of modern thought, its metaphysical foundations being what they were, was undecided, swaying it from rationalism to 'emotional rationalism', 'rousseauistic romanticism' or 'sentimentalism', until the coming to the scene of David Hume. It was the formulation of Hume's critical philosophy which gave the decisive solution to this hesitation, by dissolving the metaphysical reality of the physical order into an 'aesthetic continuum' differentiated by qualitative bundles constituted of separate and atomic impressions.

Consideration of the nature of pictorial and musical impressionism will help us to see the relation of similarity

1. Babbitt, op.cit., p.36.

2. Ibid.

existing between philosophical thought in the second half of the eighteenth century, and artistic thought in the first half of the nineteenth, leaving open the question of influence.

It is this striking similarity in the development of philosophy and art which pushed me to say that impressionism found in Hume its theoretical formulation, and in impressionistic painters and musicians its practical expositions.

The impressionist is, according to Gautier, a man to whom only impressions exist. These impressions, which form the totality of the 'aesthetic continuum', are atomic and are in a constant motion. The 'thing in itself', the Kantian 'noumena', or the physical object qua physical, in absolute space and time, have no meaning to him. The real is the perceptual, and the perceptual is in a continuous flux. Hence the impressionist treats the thing or the object as if seen for a fleeting moment. He is satisfied with the impressions gained at the first glance and foregoes everything that might make us desire to stop to get better acquainted with the person on the canvas.¹ "For that which impressionism says and holds is by hypothesis a unique and never recurring instant, not a landscape in being but a fleeting moment of the life thereof."²

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1. See Helen Gardner, Art through the Ages (New York, 1936), p. 669, where it is said that Manet "in his desire to understand thoroughly the appearance of an object under varying lights and atmospheric conditions, used to paint the same subject from the same point of view a great many times, going out at sunrise with twenty canvases so as to be able to catch quickly the elusive changes."
 2. Spengler, op.cit., p. 287.

Moreover, subject, composition, and detail are to impressionism of secondary importance. Contours are also wasted away. David, Gericault, or Courbet accepted contours because they believed in the objective existence of the line. But a line is, according to the impressionist, an illusion or an arbitrary convention of the artist by the aid of which he designates the boundaries between the different colours. It has no objective existence and does not exist, as such, in nature. That which gives us the illusion of a line is the juxtaposition of colours. A line is, therefore, the meeting point of two colours and need not be separately delineated in a painting. Thus there are no definite limits and commensurable surfaces in pictorial impressionism.

Composition in the sense of clear-cut forms does not exist in this new art. In fact the impressionist denies the metaphysical reality of the physical object and rejects the concept of geometrical perspective.

With the geometrical perspective dropped - since it has no point unless one desires to convey the geometrically conceived, three-dimensional objects as something beyond and other than the colours and their associated forms - the object, whether a person or a tree becomes given two dimensionally, in so far as the blurred association of sense data constitutes it.¹

The impressionist's aim is not to represent an object as much as to "seize the impressions of volatile scurrying moments."² Thus, in his painting, there is no composition, which

1. Northrop, op.cit., p.119. See also Louis Hourticq, l'Art et la Litterature (Paris, 1946), p.242: "Le monde solide et stable construit depuis la Renaissance par le génie des architectes... s'est dispersé dans le tâchisme mouvant des impressionnistes."
2. Lang, op.cit., p.1014.

could be specified in laws and formulae. The forms are dissolved into juxtaposed colours. "Colour is gained at the expense of organization."¹ Hence "the colourist urge is so strong that even shadow is coloured."²

Furthermore, the impressionist insists on the innocence of the optical organs in their apprehension of the different instantaneous impressions;³ and that which these organs perceive, i.e., the impressions, are not the bearers of metaphysical connotation as with realism. They are rather what they are and do not point beyond themselves to anything else which is not themselves. They are elusive, spontaneous, and atomic. The impressionist painter can indicate them by hasty brush-strokes juxtaposed on the canvas and giving the desired effect only if viewed from a certain distance.

Besides, while many of the realistic-romantic painters

1. Sheldon Cheney, A Primer of Art (New York, 1939), p.79. See also Hourticq, op.cit., pp.241-242: "Mais la peinture allait bientôt affirmer ce primat de la couleur sur le dessin jusqu'à la disparition complète de ce dernier. L'école impressioniste, comme son nom même l'indique, devait naturellement substituer le jeu des tâches colorées en quoi se résument nos impressions visuelles à la construction des formes dans l'espace qui résulte d'un jugement de l'esprit. Et en effet, les choses conservent leur solidité si les tâches sont posées au bon endroit et si les valeurs sont respectées, comme il arrive dans les peintures de Claude Monet."

2. Lang, op.cit., p.1016.

3. Cf. Petit, op.cit., p.130 and p.132: "A l'instar de Belasquez, l'impressionniste voudrait n'être qu'un oeil qui enregistre les phénomènes sensibles, et qu'une main qui traduit sa vision dans le sensible...." "l'impressionniste annonce la pureté finale de la peinture et insiste sur l'innocence de l'oeil, lequel enregistre la nature avec une entière impartialité et n'entrave pas son action par des interventions de l'esprit."

had already before given in their works an important role to light, it nevertheless still illuminated physical objects located in space and time; and it was not until the coming of impressionism that light, colour, and object were reduced to one.

We saw that the impressionist conceived of the physical object as a bundle of impressions. It was considered as an association of juxtaposed aesthetic qualities, and just as colour cannot be abstracted from it without reducing it into an inconceivable nothing, so light does not illuminate ^{it} in the sense of being something extraneous which can be easily neglected without damaging the very existence of that which is enlightened.¹ The aesthetic qualities cannot be perceived except through light. Henceforth everything exists in light.² Thus the acquisition of the scientific knowledge of light itself, believe the impressionists, will help them to possess the technique of an art which is certain and natural.³ In fact the scientific

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1. Cf. Spengler, op.cit., p.286: "The things are not even bodies, but light resistances in space, and their illusive density is to be unmasked by the brush-stroke."
 2. Cf. Gardner, op.cit., p.666: "The objective of the impressionist was to create an illusion of light and atmosphere, of light enveloping objects, which required an intensive study of light as a compound of colour and its action upon surface."
 3. Cf. Petit, op.cit., pp.134 and 136: "L'œil ne perçoit un objet, dit l'impressioniste, que par la lumière qui le frappe; c'est donc par une étude approfondie de la lumière et de ses effets que l'on assure le réalisme visuel. Comme les couleurs sont les voies de la lumière, ou des divisions de lumière, atteignez scientifiquement la lumière et vous atteignez tout...." "Acquerez une connaissance scientifique de la lumière, a-t-on-dit, et vous aurez la technique d'un art vrai, sûr, naturel." See also Combarieu, op.cit., III, p.569: "Les peintres impressionnistes avaient proclamé que la nature ignore la rigidité et la précision du dessin, qu'elle n'est que couleur, qu'elle se communique à nous par des vibrations lumineuses génératrices de nos sensations et dont la peinture doit s'efforcer de fixer les chatoyantes et fugitives émanations."

analysis of light became the mania of almost all impressionist painters. Some of them went so far in their analysis, which entailed a scientific analysis of colour also, that their works became too scientific. "Trop de science et pas assez d'art...."¹

In order to express the living, vibrating quality of light a technical method must be used mainly divisionism or broken colour. This intricate technical method of the impressionists was reduced to an exact science by a small group of painters generally called Neo-Impressionists or pointillistic impressionists.

The representatives of this school considered that a colour mixed and laid flat never looks as brilliant and alive as spots or dashes of the original colours that made up the mixture, juxtaposed on the canvas and merged by the retina of the eye at the right distance. Thus they suggested a new way of applying the pigments to the canvas.

Instead of blending them upon the palette, the artist placed them side by side upon the canvas so that the blending might be done by the eye of the spectator, standing at the required distance from the picture. As Pissarro himself said, the idea is 'to substitute the optical mingling for the mingling of pigments, the decomposition of all the colours into their constituent elements, because the optical mingling excites much more intense luminosity than the mingling of pigments'.²

Hence the Pointillists believed "that energies belonging to the sense organs themselves enter causally into the perceived thing...." That is why, "they relied upon the capacity of the visual apparatus to fuse dots of colour physically separate on the canvas."³

1. Petit, op.cit., p.145.

2. Charles H. Caffin, How to Study Pictures, (New York, 1917), p.460.

3. John Dewey, Art as Experience, (New York, 1934), p.122.

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Seurat was the flag-bearer of neo-Impressionism. A few months before his death, he explained his art to one of his friends saying: "L'art est harmonie. L'harmonie vient en plaçant côte-à-côte des éléments de contraste et des éléments similaires en ton, en couleur et en ligne."¹

The editor of Modern Masters describes Seurat's technique as follows

"with scientific precision he took the small brush-strokes of the impressionists and made them into dots all of the same size. Each dot is a light or dark shade of one of the six primary colours - blue, yellow, red, green, violet, and orange. With similar logic, he analyzed lines and tones, and their emotional effects of sadness, calm, and joy."²

F.S.C. Northrop comments on this quotation by saying: "This is Hume's philosophy par excellence."³

That there is a similarity between Impressionism and Humean atomism I do not deny. But that the pointillistic impressionism of Seurat should be Hume's philosophy par excellence I question.

In so far as the impressionists believe that impressions are spontaneous and atomic, and in so far as they dissolve the object into bundles of sense-impressions, sensations or aesthetic qualities and conceive of the whole as an "aesthetic continuum"⁴, they are Humeans. Moreover, in so far as the neo-impressionist believes that the "aesthetic continuum is built up of independent

1. Petit, op.cit., p.145.

2. As quoted by Northrop, op.cit., p.119.

3. Northrop, loc.cit.,

4. Ibid.

atomic sense-data, he is also expressing a Humean belief. But I do not think that he is a Humean par excellence. I say so because in his intricate technical method, the pointillist goes beyond Humean atomism, which he takes for granted, to a scientific analysis of the metaphysical nature of the impression in its original constitution. This is something which, as far as I know, Hume did not attempt to do since he was not interested in the study of the original constitution of the impression qua impression before it is perceived, as much as in the study of the origin and nature of man's knowledge.

Having ended this brief survey of pictorial impressionism, I would like now to say a few words about musical impressionism.

"Musical impressionism shares many traits, even technical ones, with pictorial impressionism."¹ The incentive towards it was proposed by Liszt who first utilized in his music neutral tonalities and advocated the simultaneous use or mixing of two tonalities.

There is in classical music a major and a minor mode and there are also different pitches. Moreover, every melody has a certain construction regulating the relationship of the various pitches. This construction is based on definite rules. We can say that, in general, the first principle of classical composition is that the transition from one tonality to the succeeding one should be effected by the use of a transitory tonality which is nearest to the first and the second and which

1. Lang, op.cit., p.1018

is in the same mode. For example, let us suppose that we are in the tonality of C major and we want to change to the tonality of D. In order to do this it is preferable to use the tonality of G major as a transitory one. This intertonality, which may be suggested by one chord only e.g. a pivot-chord, plays an important role in the logical construction and the form of the piece of music.

In musical impressionism there is no logical compositional grouping of ideas. That is why intertonalities play no logical transitory role in this music.

In his criticism of musical impressionism Vincent d'Indy says

La gamme par tons constituée à six notes est loin d'être un progrès sur notre gamme occidentale traditionnelle, puisqu'elle supprime toutes tonalité et conséquemment toute modulation¹.

As a matter of fact I can say that there is no question of tonality or modulation in musical impressionism. This is due to the fact that there is no logical compositional grouping of ideas. What matters is a certain mood; and the unifying effect of the work is no longer achieved by the logical construction which regulates the relationship of the various pitches, but rather by the general suggestive mood or atmosphere announced by the title.² "Thus it is not the order but the mood of the particular sections which achieve form, for it calls not

1. As quoted by Combarieu, *op.cit.*, III, p.572.

2. Cf. G. Gaudetroy Demombynes, Histoire de la Musique Française (Paris, 1946), p.406: "Ah, que nous sommes loin de l'art métaphysique, de l'art de construction intérieure et de repliement sur soi, de Wagner; ici c'est une ambiance, un milieu favorable aux images, aux formes, aux impressions visuelles et sensibles; c'est un langage dont les résonances se

on memory, but only on a faculty of sensory impressionability."¹

Furthermore, where pictorial impressionism uses colour and light effects, musical impressionism uses resonance and tone colour; and when the impressionist painter goes into a detailed and scientific analysis of light, the impressionist musician concentrates himself on a careful study of the acoustic and the psychological qualities of his instruments and his harmonies. This concentration gave him a sure technique by the aid of which he could develop a pointillistic style similar to pictorial pointillism.²

The father of musical impressionism, as we know it today, is Claude Debussy. He was still young when he was attracted by pictorial impressionism and poetical symbolism. His sympathy to this new artistic tendency pushed him to transpose it into music.³ This gave rise to impressionism in music.

In his Histoire de la Musique, Robert Dufourcq says

Debussy s'applique moins à trouver des mélodies qu'à créer par une suite d'harmonies capiteuses (onzièmes, treizièmes) une atmosphère chatoyante mystérieuse. Chez lui chaque accord a sa saveur, chacun sa couleur. Ainsi, le poète, qui est un peintre, procède-t-il par touches légères.

prolongent extérieurement."

1. Lang, op.cit., p.1018.
2. Cf. Ibid., p.1019: "Pointillism in painting has its counterpart in music, in chords which unite many far removed intervals, chords of the ninth, eleventh, thirteenth. The more of these and the farther removed the less are they capable of merging, creating instead a vibrating, oscillating, glimmering sound complex, trembling and nervous, caressing the senses."
3. Cf. Paul Landormy, Histoire de la Musique, ed. by Paul Mollotée (Paris, 1948), Chapter XXVI, p.478: "Justement on peut dire de Debussy qu'il préfère la couleur à la ligne; c'est à dire l'harmonie à la mélodie. La musique semblera parfois faite comme de tâches sonores juxtaposées...."

S'affectionne les gammes par tons entiers, dédaigne les résolutions, la distinction jusqu'alors observée entre modes majeurs et mineurs. S'affranchir de la loi tonale, fragmenter les thèmes, laisser à la trame musicale toute la souplesse nécessaire, fuir tout ce qui est statique, suggérer par contre tout ce qu'il y a de fuyant d'éthéré dans la nature comme dans la pensée, telles paraissent être ses préoccupations.¹

1. Nohert Dufoureaq, Histoire de la Musique (Paris, 1945), p.1036.

CONCLUSION

My aim in this conclusion is, first, to consider whether the parallelism between certain theories of knowledge and certain theories and techniques in art, the subject of this thesis, characterizes only one period in the history of culture: namely, the seventeenth and the eighteenth centuries; second, to suggest reasons why such a parallel similarity does at all exist.

As far as the first question is concerned, I say that although in this thesis my attention has been confined to certain theories of knowledge in the seventeenth and eighteenth centuries and their parallel similarity in art I might, nevertheless, have chosen other centuries and might have found a parallel similarity. This is due to the fact that such a similarity results from the very nature of philosophy and art as such and not from any special period in their history.

In testimony to that I shall study briefly the scholastic attitude towards the world and the reflection of such attitude in medieval art.

The Medievalists believed that man is the center of the universe, which is small and finite. Everything in this universe is meaningful since it is full of purpose; and instead of "treating things in terms of forces, motions, laws, changes of mass in space and time, and the like," the medievalists "treated them in terms of substances, accidents, and causality;

essence and idea; matter and form; potentiality and actuality."¹

Moreover, it is important to note how useless and unimportant were space and time to the medieval mind. In The Metaphysical Foundations of Modern Science, Edwin Burttt says:

"In particular it is difficult for the modern mind accustomed to think so largely in terms of space and time to realize how unimportant these entities were for scholastic science. Spatial and temporal relations were accidental not essential characteristics. Instead of spatial connexions of things, men were seeking their logical connexions;...."²

That is why the medieval artist who, determined by the general trends of the thought of a period in which matter was considered evil and spatial connexions unimportant, disregarded matter's first characteristic, i.e. extension, and expressed things in a flat, floating way. Medieval art was an intellectual art. Profane subject-matters were practically unknown to it. It was coloured by the noblest convictions of the church to which it was the appointed servant.³

A brief survey of sixteenth-century art will bring another testimony to the fore-mentioned similarity. Here, I must remind the reader that the destiny of art is closely related to the destiny of thought in general. Hence, it must not

1. Burttt, op.cit., p.5.

2. Ibid., p.13.

3. Cf. Bernhard Berenson, The Italian Painters of the Renaissance (London, 1938), p.4: "The Church from the first took account of the influence of colour as well as music upon the emotions. From the first time it employed mosaic and painting to enforce its dogmas and relate its legends, not merely because this was the only means of reaching people who could neither read nor write, but also because it instructed them in a way which, far from leading to critical inquiry was peculiarly capable of being used as an indirect stimulus to moods of devotion and contrition."

surprise us to see that with the beginning of the sixteenth century, and due to the occurrence of new discoveries, new conceptions and new attitudes developed and vice versa.

The revolt against medieval theocracy gathered more and more momentum. Aristotle's physics crumbled in spite of all the unfortunate efforts of the scholastics to maintain it. Geocentricism was proved false. Hence a large number of people emancipated themselves from the influence of scholasticism and followed a naturalistic and realistic trend of thought which tended to ignore all that lies beyond experimental verifiability.

In this climate of exalted empiricism matter was characterized by extension. Spacial connexions were given priority to logical ones. In fact things were defined in terms of their location in space and time.

These new conceptions of extension and spatial connexions were translated into artistic terms through the discovery of perspective and background.

"Objects were depicted upon a plain surface in conformity with the way they are seen without reference to their absolute shapes or rotations."...."The whole picture or design is calculated to be valid from one station only."¹

This and the former testimony suggest that the similarity in the development of philosophy and art is not confined to the seventeenth and eighteenth centuries only, but has existed before and will exist after the fore-mentioned periods.

My thesis has sought until now to illustrate the fact of the existence of a similarity in the development of philoso-

1. Siegfried Giedion, Space, Time, and Architecture (London, 1949), p.31

phy and art. The thing to do now is to try to explain why such a similarity exists.

I said a minute ago that the existence of such a similarity was due to the very nature of philosophy and art themselves. The question is, what is there in the nature of both of philosophy and art that forces them to develop through the centuries in a similar way? In other words, why should there be any similarity in the development of philosophy and art?

I believe that such a similarity exists because art and philosophy are two modes of expression of human experience and human reactions to experience. As such they bear a relation of similarity in so far as they express human experience and human reactions to experience in different terms. The difference in the means of expressions and the manner of exposition does not necessarily mean a difference in that which is expressed.

It is only very superficially that we can speak of a difference between philosophy and art. I say very superficially because, though no two people would seem further apart than the philosopher and the artist, they, nevertheless, are very intimately related.

Though the artist is concerned with the sensuous excitement of materials, the pleasures of evident forms, the persuasion of emotional resonance; though he is concerned with the face of beauty and his business is the creation of fresh and immediately sensible forms, while the philosopher is preoccupied, by intention at least, with the passionless consideration of logically related themes, with general and therefore abstract ideas and with the anatomy of truth rather than the face of beauty,¹

1. Irwin, op.cit., p.111.

nevertheless, art and philosophy resemble and involve each other. In spite of all their different concerns, their different ambitions and their different means of expression, the artist and the philosopher, both of them, comment on life and share jointly in ideas and methods which shape the course of their common world.

Philosophy and art resemble each other because both the artist and the philosopher, qua men living in the same century and sharing in the same social order or conditions, are subject to those major influences which determine the life of thought in general in the century. They will either accept the given order of things, or reject it by suggesting new orders.

Every period in the history of thought is characterized by a certain seal which is reflected in some of the different literary and artistic activities of the epoch. The artist is first of all a man and like all men he has a psychology, a cosmology and a theology. These may be in the form of beliefs which are not systematically or consciously formulated in clear terms; or they may be simple tendencies which reflect a certain type of psychology, cosmology, or theology. But what is important to know is that these beliefs or habits do, quite evidently, determine men's actions.

Artistic activity is not whimsical. Rather, it is intellectually founded.¹ The artist does not in his artistic

1. Cf. Petit, op.cit., pp.37 & 39: "Comme tout homme, l'artiste a donc une psychologie, une cosmologie, une theologie naturelle ou surnaturelle.... Il nous suffit de retenir ici que la

creations exclude the intellectual elements of life and culture and preserve only the emotional or sensational residue. On the contrary, he "fuses thought itself into emotion"¹ or perception and expresses the impact of thought on feeling and sense-perception.

In fact most of the seventeenth-century writers and artists have incorporated the Cartesian method in their works. They have shown how it appears or how it feels to be a Cartesian. Poussin², for example, has tried to show in his paintings what the world looks like through the spectacles of Cartesian rationalism ground as they are for clarity and distinctness of apprehension. Another example is Boileau who has expressed in a poem³ how it feels to be a rationalist.

The artist is not blind to the different intellectual activities which shape the general trend of thought of his period. The trend of thought creates an atmosphere which is, in a way, breathed by all the people living in it.

connaissance intervient dans le processus de la création, et que l'artiste comme tel prend une attitude humaine fondamentale sur les problèmes métaphysiques et théologiques. Sans le besoin de se communiquer, sans le désir d'exprimer ou de représenter soi-même ou le monde, l'art cesserait d'exister, car il perdrait sa raison d'être."

1. R.G. Collingwood, The Principles of Art (Oxford, 1947), p.
2. Cf. De Noldac, Pierre, La Peinture Italienne (N.p., 1941), p.4: "Poussin est le plus illustre représentant de l'art classique français. Il voit dans la raison la faculté maîtresse et ne croit pas que la création d'une œuvre d'art digne de ce nom puisse sortir de l'effervescence de l'imagination... C'est cette foi qui a fait de son art un art essentiellement intellectuel.
3. See page 22, footnotes 2 and 3.

What is important here to stress is that though different people belonging to different classes live in the same environment or grosso modo in the same society, nevertheless, from the point of view of intelligence and consciousness, they do not live in the same milieu. This is due to the fact that the philosopher or the artist, whatever is the class to which he belongs, is more or less conscious of these intellectual tendencies prevailing in his period and shaping its very life. On the other hand an uneducated person is blind to these tendencies.

I said that philosophy and art resemble each other in so far as they are both modes of expression of human experience and human reactions to experience. The resemblance becomes clearer when we speculate upon the manner in which both the philosophical and the artistic work are done. Such a speculation makes it evident that the artist, and the philosopher as well, are in their work selective and constructive. Both of them are presented with sets of materials and principles out of which they will build, one by his technique and the other by his logic, a system or a form. The structure of the philosophical work may be less obvious or more difficult to seize than the structure of a work of art, since the former is "embodied in less immediately glamorous materials."¹

1. Irwin, op.cit., p.142. See also same pp.142-143: "A philosophy seems at first glance or in the midst of one's study of it to have much more to do with the disinterested plodding inquiry into truth than in the interested passion for beauty. But a philosophy, too, has its wonders of form and

Besides this resemblance of procedure mentioned above it is important to note that philosophy and art involve each other. In fact it seems to me that what art exposes philosophy explicates and what philosophy explicates can sometimes be perfectly exemplified in art. Both the artistic exposition and the philosophical explanation are different modes of expression of experience. But while the former uses colours, lines, notes, or such other units as its means of expression, the latter uses word-structures as such means.

Moreover, the philosopher must be interested in art because "the very rationality which he seeks to find or make possible in the universe the artist in his small area and within the scope of his materials is trying to achieve."¹

Hence, philosophy and art resemble and involve each other; and, what is perhaps even more important, they give one another reciprocal and mutual support. It is not sufficient to say that what one exposes the other explicates, but one could further say that, sometimes, what philosophy posits as a problem seems, by implications or by analogy, to be posited by art, and what philosophy suggests as an answer seems also to be suggested by art.²

Furthermore, it takes an artist and an aesthetician to show how art is "the only way of saying certain things or uttering certain aspects of experience,"³ and how by means of

structure; the architecture rather than the truth of Kant's Critique of Pure Reason is its fascination for many readers.

1. Ibid., p.113.
2. Cf. Ibid., p.130.
3. Ibid., p.133.

art we are able sometimes, to bring within the scope of men certain things which they considered beyond their comprehension.¹ So it takes a philosopher to see the moral philosophy which art elaborates in its very practice. Not only does art convey immediately through the senses moral truth or moral essentials, but also the artist in his very practice elaborates materially a moral philosophy. The very process of painting, composing, moulding, or planning involves a whole metaphysics. This is due to the fact that the artist does not consider this particular scenery, or face, or whatever the subject may be, as a means only, but rather as an end whose fulfilment depends upon a process of which every step is in turn an end in itself. Every step has a certain purpose in the achievement of the work of art. Thus the means, in this case the media,² are ends in themselves. They constitute the process by the aid of which the work is achieved and at the same time they intrinsically share in the whole which they help to achieve.³

1. Cf. Ibid.,: "Furthermore, those languages themselves seem to come from something deeper and more compelling, to touch the being of things at a profounder level than the thin abstractions of philosophy and science.
2. Cf. John Dewey, Art as Experience, p.197: "'Medium' signifies first of all an intermediary.... Such external or mere means, as we properly term them, are usually of such a sort that others can be substituted for them; the particular ones employed are determined by some extraneous consideration, like cheapness. But the moment we say 'media' we refer to means that are incorporated in the outcome.
3. Cf. Irwin, op.cit., p.121: "Nor is there any where in moral theory or practice a better or more explicit lesson to be found than art provides in the importance of treating means seriously, of insisting that the means themselves should have something of the character of ends.

Hence the philosopher, worthy of the name, cannot totally ignore the artist and art in general.

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