REVIEWS

THE NEW VIENNESE SCHOOL

KUNSTWISSENSCHAFTLICHE FORSCHUNGEN, II. *Edited by Otto Pächt, 160 pp.; 81 figs. Berlin, Frankfurter, 1933.*

The *Kunstwissenschaftliche Forschungen* is perhaps the most advanced organ of European academic writing on art history today. It is published by a group of very cultivated and sensitive young art-historians—mainly Viennese, but including several Germans and Russians—who follow in the tradition of Riegl, and are concerned with the structure of individual works of art and the principles underlying styles and their development. Although some of this group (especially Alpatoff and Kaufmann) are also interested in the content of art and the specific historical conditions under which new forms arise, their attention has been given mainly to the study of forms as an independent science. The references to meanings and to the causes of historical change are usually marginal or are highly formalistic and abstract. The strength of the group lies in the intensity and intelligence with which they examine formal arrangements and invent new terms for describing them. They draw on contemporary writings in philosophy and psychology and welcome suggestions from neighboring fields in the effort to build up a "science of art." Drs. Sedlmayr and Pächt, above all, have found in Gestalt psychology formulations and tendencies congenial to their own views on the nature of art; they have also excerpted from the logical positivists and related writers on the philosophy of science (Lewin, Carnap, Reichenbach) various observations on method.

Precisely because their writings are often programmatic, being presented as examples of new approaches to art or as corrections of inadequate current methods, it is necessary to summarize the general notions underlying their work, especially for American students who have been fairly indifferent to theoretical problems. Unfortunately, their views have nowhere been published in a carefully reasoned and systematic form, but have appeared in programmatic essays or reviews or in parenthetical dicta in the course of monographic writing. It is therefore difficult to describe their theory as more than a tendency, still fluid and changing; the essays in this volume are hardly uniform in character, and whatever directions and theoretical assumptions are revealed in them have perhaps already been modified or abandoned by some of the writers.

Dr. Sedlmayr has been somewhat more explicit than the others. He has published two articles on the theory and method of the history of art: *The Quintessence of Riegl's Doctrines* (the introduction to Riegl's *Gesammelte Aufsätze*, Vienna, 1929), and a programmatic essay, *Towards a Rigorous Science of Art.* The latter heads the first volume of the *Kunstwissenschaftliche Forschungen* and may be taken as an introduction to the program of the group or, at least, of the editors. Here Dr. Sedlmayr distinguishes a first and a second science of art, the first, simply gathering and ordering the material according to outward signs and evidences, like documents, inscriptions, conventions of shape and those symptomatic elements which for some scholars constitute "style"; the second—his own—concerning itself more with "understanding," with the underlying structure of forms and the pervading principles according to which the work of art becomes an organized expressive whole. The second is considered the higher science, but admittedly presupposes and utilizes the first; for without the ordered materials and assured data of the first, the second cannot operate successfully. On the other hand, the second, through its insight into forms, may even throw light on unsolved problems of classification.

The logic of the methods of the second science is unfortunately not presented in the article; but constant reference is made to Gestalt psychology as a scientific basis for explaining the organized character of shapes, colors, and spaces in works of art. Following this psychological theory of how perception is organized, the investigator of the work of art or style of art looks for an underlying pattern or configuration or ordered mode of seeing which constitutes the basic principle of the work or style. From this he deduces not only the character of the parts, but many non-formal aspects of the work, even its content and its history; for a given mode of seeing, in virtue of its peculiar nature, can admit only certain embodying objects, and has limited possibilities of development. To discover this basic pattern or principle the student must possess first of all the "correct" attitude to the work; he must approach it as an organized whole before he can acquire insight into the necessity of its structure and formal relations. The insight is then verified by analysis, which confirms in the formal connections of numerous details of the work the discovered principle of the whole.

The distinction made between the merely descriptive and classifying nature of the first science and the higher "understanding" of the second is not so much a distinction between the values of observation and theory, such as agitates some physicists and philosophers of science, but corresponds rather to the distinction made by many German writers between the natural sciences, which "describe" or classify atomistically the inorganic and lower organic worlds, and their own sciences of the spirit (*Geisteswissenschaften*) which claim to penetrate and "understand" totalities like art, spirit, human life and culture. The great works of the latter depend on depth of insight, of the first, on ingenuity and exactness. Such a distinction, often directed against the plebeian manipulation and matter-of-fact, materialistic spirit of the best in natural science, puts a premium on wishful intuitiveness and vague, intangible profundity in the sciences that concern man. The natural sciences, no less than the sciences of history and culture, require insight, and the latter, no less than the natural sciences, require accuracy and the utmost respect for fact. Actually, there is little difference, so far as scientific method is concerned, between the best works of the so-called first and second sciences of art. They both depend on relevant hypotheses, precise observation, logical analysis, and various devices of verification. The sense of a fundamental difference in scientific status arises from two

aspects of the work of the second "scientist of art." In the first place, he is concerned with shapes or qualities which are not immediately apparent and which are rarely described in a definite manner. In the second place, the qualities which interest him are often involved with judgments of value and with modern artistic interests that have developed only recently and in opposition to older interests, and are limited to small groups of people who are never required to present their preferences or insights in an explicit and universally accessible form. We value insight into the "form" of a work more than we value knowledge of its date or author. To acquire the latter, it is often unnecessary to study the character of a painting as a work of art. But it is overlooked that the validity of either knowledge is established in the same way, and that in both we deal, not with absolute wholes, but with isolated aspects of the work of art, from defined points of view. The change in viewpoint hardly constitutes a new science of art. The break with past methods is more apparent than real. The difference lies in the type of problem and in the interests of the investigator, the Viennese group showing a special predilection for questions of formal arrangement. If in this respect, they are more advanced, let us say, more subtle, than their predecessors, in other respects they resemble those much deplored scholars who devote themselves largely to problems of attribution or the discovery of the subject or provenance or historical antecedents of pictures. Like the latter they are interested mainly in individual objects, isolated from the conditions of their creation; or, if they deal with a style or group of works, the larger field is again considered in itself, without respect to the causes of its unity, diversity or development. The hypotheses with which they approach historical problems can hardly be considered an advance on those employed by the ordinary run of art historians. The works of the "second science" are relatively poor in positive historical conclusions, and rich in ingenious, but unverified insights and in vague assertions.

A single instance will show how ill-founded is the hierarchical pretension of the second science of art. In his article on the system of Justinian, Dr. Sedlmayr tries to discover what elements or qualities distinguish mediaeval from classic systems of architecture, a question that has been asked by many historians of the lower class, and which in itself constitutes no real novelty. One of the three essential qualities or elements he finds is incommensurability and imperceptibility of proportions. In this he repeats the common idea, already well established in the nineteenth century, of the contrast of the mathematical order and clarity of the classic building with the irregularity and unclarity of the mediaeval. But there is a difference between the approaches of Dr. Sedlmayr and the archaeologists of the first school to this problem: the latter would verify their point by referring to actual measurements, or would engage in a detailed and critical discussion concerning the trustworthiness of existing measurements of buildings which stand in ruin or have been affected by numerous contingencies. Dr. Sedlmayr, on the other hand, presents his generalization in an aphoristic manner, and leaves it to others to do the measuring and verification. His procedure is all the more contrary to ordinary scientific practice, since it is well known that a difference of opinion exists among archaeologists concerning the nature of mediaeval proportions; any discussion which pretends to treat of proportions as an essential aspect of architecture must make clear in what sense the concept is applied. Dr. Sedlmayr refers to proportions as "*schaubar*" and "*unschaubar*," although it is evident that proportions are not grasped by the eye; we do not *see* the proportions of a Doric column or a Greek interior, in contrast to an imperceptible Romanesque proportioning. What he means perhaps is that the shape of a Greek building or element is fully visible, or that its proportions can be inferred through a module, unlike the mediaeval churches in which many parts are ill-defined or overlapping, and no single unit can be used as a means of judging the scale. But even such interpretation is far from the rigor which Dr. Sedlmayr has indicated as one of the distinguishing goals of his second science of art.

Yet it is precisely his avowed desire to give to the special "understanding" of art the exactness of the natural sciences that distinguishes him from the ordinary exponents of the "sciences of the spirit." He is interested more in the artistic object, less in the state of mind or world-view of its creator, and constantly cites scientists and logicians of empirical tendency.

I do not know whether all the contributors to the *Kunstwissenschaftliche Forschungen* would subscribe to the programmatic statements of Dr. Sedlmayr, or if their articles are considered by the leader as valid examples of the "right" tendencies and methods. It must be said that however sensitive, intelligent, and searching are some of the articles in the first two volumes of the series, they depart far from scientific rigor. Anyone who has investigated with real scruple a problem of art history knows how difficult it often is to establish even a simple fact beyond question and how difficult it is to make a rigorous explanation. To criticize the articles from the viewpoint of an ideal rigorous science—that is, a science scrupulous with regard to fact, probability and implication—this would be an act of malice, and would blind us perhaps to important approximations arrived at in reasoning, groping and guessing, and embedded in half-truths and errors. The articles, in general, are sketchy, clever, unsystematic, full of original *aperçus* and untested "belles-lettristic" characterizations. No group of psychologists or physicists would venture to announce articles of such looseness as a contribution toward a more rigorous science of psychology or physics.

In several of the articles we meet with spiritualistic conceptions and with allusions to qualities or causes which we have no means of verifying. The authors often tend to isolate forms from the historical conditions of their development, to propel them by mythical, racial-psychological constants, or to give them an independent self-evolving career. Entities like race, spirit, will, and idea, are substituted in an animistic manner for a real analysis of historical factors. Professor Kaschnitz-Weinberg tells us that the feeling for mass among the Egyptians must be due to racial inclination because this quality appeared so suddenly, without signs of a gradual development. And Dr. Sedlmayr explains to us that the system of Justinian, being "rational", could not last more than thirty years, whereas the succeeding Byzantine system, being irrational, was capable of a life of six centuries. This is palmistry or numerology, not science.

Although the subject of Dr. Sedlmayr's article is the system of Justinian, we have no inkling why it is of Justinian, what it has to do with this emperor, beyond the coincidence of time and place. All that the author admits is that the conditions (unspecified) of the reign of Justinian were favorable to the immanent emergence of this system; but what these conditions were,

how they were favorable, we are not told; at any rate, the system is attributed to Justinian, not because the emperor or his particular society exerted a positive influence, but rather because the immanent destiny of the idea of a certain system of architecture was favored—or, at least, not blocked—by the tasks set for architects by Justinian. The relation of the tasks to the system and its development is nowhere discussed. This neglect of concrete relationships is masked by the brilliant variety of aspects, largely formal, treated briefly by the author. The appearance of comprehensiveness conceals the lack of historical seriousness in such writings. We do not reproach the authors for neglecting the social, economic, political and ideological factors in art, but rather for offering us as historical explanations a mysterious racial and animistic language in the name of a higher science of art.

The new Viennese group wishes to be concrete in analysis of works of art as individual, objective, formal structures; but in turning to history they lose sight of the structure of the historical object, namely, the particular human society, and deal with absolute general categories that seem to produce history by their own internal logic. The new Viennese school has, in fact, no historical objects. They tend to explain art as an independent variable, the product of an active spirit, or a *Kunstwollen*, which has an immanent goal and which may even determine the conditions congenial to the kind of art this *Kunstwollen* is destined to produce. The school lacks an adequate conception of history to direct their historical interpretations in the sense of that scientific rigor which they require in the analysis of forms. They prefer, in short, teleological deductions to an empirical study of historical conditions and factors.

It cannot be argued that their real aim is to create a science of art, rather than a history of art; for while this distinction expresses, perhaps, the inclination of some of the writers, yet no article in this volume is strictly a work of *Kunstwissenschaft*, i.e., dealing systematically with supposedly inherent, general, historically unconditioned aspects of art. A problem of history is often at the center of the formal analysis and interpretation, and the writers usually cannot refrain from ambitious historical conclusions.

It must be pointed out further that the limitations of the school are not confined to the historical aspect of art. Their attitude to the work of art as an historical object corresponds to their formalistic approach. Just as the abstract *Kunstwollen* creates its own history, so the "structure" or "principle" of the work as a whole seems to create its own parts. Dr. Sedlmayr apologizes for the remnants of positivist, naturalistic thought in Riegl and begs us to read "part-whole relation" when Riegl says "cause." The nature of the individual work is grasped more and more as something strictly internal in its origin, that is, dependent on a logical working out of structural principles, and forming finally a kind of self-regulating aesthetic machine, in which there is very little that cannot be deduced from the autonomous whole or center. The multiplicity of conditions which enter into the formation of a work of art is reduced to the action of a "principle," and the discovered structure or principle is sometimes substituted for the work itself.

The doctrinaires of the school have not investigated their own method of approach or inquired into its relation to contemporary values in art and social life. They assume that it is a purely "scientific" approach without presuppositions or sets of values which operate in the choice of objects and aspects and in the application of a method. When we observe the broad abstractions and unverifiable subtleties, the straining to create insights, the conceits of formal observation that often crop out in such writings, we are reminded of the practices of contemporary art and art criticism, in which the inventive sensibility creates its own formalized objects, delights in its own "laws," and enjoys its absolutely private fantasy, justifying this activity as an experimental system of artistic deduction, or as an intuitive perception of essences and wholes.

Despite (or, perhaps, because of) the abundance of references to contemporary philosophy (and other fields) in the writings of the theoretical leaders of this group, they lack a consistent theoretical foundation. It is significant that Dr. Sedlmayr turns to idealistic philosophers and sociologists (Scheler, Vierkandt) when he discusses history and society, although he continually appeals to methodologically materialistic and empirical writers (Reichenbach, Lewin, Carnap) to document his ideas of rigorous scientific method. The inconsistency is apparent enough, but has not been sufficiently felt by Dr. Sedlmayr. His admission in 1929 that the further development of Riegl's methods depends on the recognition of their weaknesses should be taken more seriously. Unfortunately he has not made clear just what these weaknesses are.

Despite these defects, American students have much to learn from this new and already influential school of German historians of art. We lack their taste for theoretical discussion, their concern with the formation of adequate concepts even in the seemingly empirical work of pure description, their constant search for new formal aspects of art, and their readiness to absorb the findings of contemporary scientific philosophy and psychology. It is notorious how little American writing on art history has been touched by the progressive work of our psychologists, philosophers and ethnologists.

I have summarized in detail the articles in this volume in the hope that students who do not read German will be enabled to form some idea of the character of formalistic art history in Germany and Austria to-day.

1. The first essay, *Remarks on the Structure of Egyptian Sculpture*, by Prof. G. Kaschnitz-Weinberg, is vaster in scope and more systematic in intention than the title indicates. It is an effort to deduce the underlying principles of Egyptian art and to distinguish Old Oriental art from European as a whole. The author's conclusion that Egyptian sculpture is the conservation of organic life through inorganic forms, the effort to achieve an absolute stability and immobilization, a quality of timeless, incorruptible being, is familiar enough since Hegel, and had been felt by the poets before it was formulated by the scientists of art. But Kaschnitz-Weinberg's conclusion differs in several respects from the common poetic characterization, apart from the more systematic formal analysis and the effort to distinguish precisely between early and later Egyptian art: first, in that he formulates the nature of Egyptian art as having grandiose, quasi-metaphysical properties, which are presented as prior to and above the works themselves; second, in that he holds these properties are willed by the Egyptians and are inherent in some aboriginal psychological predisposition of the people of the ancient Orient (cf. on this point the article by Andrae, in the recent Dörpfeld *Festschrift*); third, in that he concludes the structure and qualities described are altogether independent of Egyptian culture as a whole, and even of the mode of representation: he sees the content merely as a material poured into a preëxistent ideal mould. It would be hard to discuss these

views critically in the author's broad and often intrusive terminology. To say that Egyptian art is "petrified form, not formed material," or to speak of the "timeless endlessness" of Egyptian space, or to comprehend all European art since the neolithic period under the categories, ornament, activism, and incorporeality, whereby the expressionism of the twentieth century and neolithic art become identified psychologically, all this stimulates our fantasy and suggests possible distinctions, but it carries us far from the objects, to the irreducible particularity of which the second *Kunstwissenschaft* is dedicated. It is a typical practice of expressionistic art criticism and cultural history.

2. The article of Dr. Sedlmayr on *The System of Justinian*—a chapter from a projected book on architectonic systems—analyzes the buildings of Justinian as the first mediaeval system and Hagia Sophia as the most crucial structure in history, summarizing the whole past of architecture and pointing to the mediaeval future and even beyond.

The characteristics of the system of Justinian are: (1) the embracing or overlapping (*übergreifende*) form—a large arch which spans two or more subordinate arches, (2) the embracing or overlapping baldachin, (3) incommensurable proportions. Not all mediaeval architecture has these three elements, but all architecture which has these is mediaeval. Late classic art knew the baldachin vault, but a baldachin resting on a wall or on supports distinct from the dome or vault, whereas in mediaeval art the baldachin is primary and homogeneous, continuous with its supports, and embraces, or grows into, the wall as well. It is the distinct skeleton of the walls, which constitute a filler. Given the embracing baldachin, which is the spatial application of the simpler principle of the embracing arch, Dr. Sedlmayr deduces a whole series of characteristics of mediaeval architecture, including the numerous vertical bays of Romanesque and Gothic, their fugitive proportions, their diaphanous structure, their technical complexity and calculation. In the single idea of the embracing baldachin is latent the whole variety of types of the period of Justinian, and in the latter is contained the variety of subsequent forms. This unfolding of immanent possibilities could be realized only where the material problem or task was favorable to the logical implication; that conditions were indeed favorable was due to a peculiarity of mediaeval thought, which was itself dualistic in a manner analogous to the formal dualism of the embracing baldachin.

If in this highly deductive and compact article, few of the broad assertions are supported by historical evidence, the author has promised subsequent articles to provide fuller proof (see *Byzantinische Zeitschrift*, 1935.).

The following difficulties may be observed in his theories. The concept of system is not sufficiently clear; it is only vaguely distinguished from formal structure. Proportions and various stylistic qualities are included in the discussion of the system, but the exteriors of buildings, the structure of the galleries, are neglected, though integral elements of the system. The system of Justinian is called the first mediaeval system because of the embracing forms; yet it must be admitted that there are whole groups of mediaeval buildings—Carolingian and Romanesque—which lack this principle. Nonetheless, in discussing the architecture of the fifth and sixth century in Syria and Asia Minor, which reminds many scholars, including Dr. Sedlmayr, of Romanesque architecture, he states that it is unmediaeval, because it lacks the embracing form. Thus in delimiting a style, the "principle" or system becomes an atomistic concept, as in nineteenth century archaeology, which distinguished Romanesque and Gothic architecture by the round and pointed arches. I do not doubt that a scholar proceeding from a study of Romanesque and Gothic art might arrive at other definitions of the mediaeval, which would exclude the buildings of Justinian as unmediaeval. At any rate, Dr. Sedlmayr's broad definition entails a theory of the Byzantine origin of western mediaeval architecture, a theory which is very doubtful, and which will probably shatter on the difficulties of establishing a genetic continuity of Byzantine and Romanesque building.

Thus we cannot deduce from his conception the embracing vertical shafts (comprising two or more stories of superposed arches), which are crucial for the development of Romanesque and Gothic architecture. Dr. Sedlmayr assumes that the numerous stories and the verticality of the Western mediaeval systems follow directly from the baldachin principle, but I believe this assumption is neither historically nor logically plausible. If, in the history of the system of Justinian, the form of the dome seems to precede the form of the wall, in the mediaeval systems, the reverse is true: the vertical shafts are prior to the vaults. In the first, the wall was skeletonized after the dome had long been employed; in the second, the skeletal wall-form preceded the application of the vault. This difference in process of development corresponds in turn to the difference between the opposed centralized and basilical loci of the two developments. The superposed stories and long naves of mediaeval churches are presupposed in the traditional basilical type which is essentially foreign to the system of Justinian. The vertical shaft, embracing two stories, on the other hand, can be cited in Persian and Mesopotamian architecture (Ctesiphon, Hatra) and in the Spanish-Roman aqueducts (Merida), as well as in later Northern wood building. It may, however, be an independent invention of the early Romanesque architects. Significant for the distinction between this embracing shaft and the embracing arch form is the fact that in many mediaeval churches where both the embracing shaft and arch are used (Caen, Mt. St.-Michel, Laon, St.-Remi, Reims) the horizontal moldings run across the supports of the embracing arches, but not across the free vertical shafts. The verticality, in other words, is determined here, not so much by the supposedly Byzantine element, as by the non-Byzantine and possibly native shaft. If S. Vitale shows a tendency toward accented vertical bays, we cannot infer therefore that Gothic verticality is inherent in the system of Justinian, any more than we can say that Romanesque verticality or squatness is inherent in classical architecture, because of the elongated or dwarf columns that appear in certain late classical buildings. The particular character of Gothic verticality is not only a matter of the proportions of individual bays or wall-units, but also of the relations of these to the various axes of the building, relations which are irreducible to the early Byzantine baldachin.

Dr. Sedlmayr concludes from his study of the historical stages of the baldachin in late Roman architecture that the system of Justinian is essentially a development in Roman architecture, in opposition to those who have stressed an East-Hellenistic or Oriental origin of early Byzantine building. He admits, however, the importance of an eastern contribution in mass, space, and decoration; but unfortunately he does not attempt to evaluate it or define it precisely, and therefore remains unconvincing, somewhat unclear, despite his emphatic

assertion of a Roman origin. The dependence of the solutions of Justinian's architects on the pendentive and squinch, which are hardly Roman inventions, also weakens the strength of his conclusions. Similarly his description of Armenian architecture as a merely provincial style is inadequate. Our knowledge of the architecture of the fifth century is still so slight that we hesitate to consider an element first documented in the earlier sixth century as necessarily an innovation of that period. Already in the first part of the fifth century there appears in Italian churches the great apse embracing an open arcade, as in the apsidal and niche spaces of Hagia Sophia and S. Vitale; and in the Orthodox Baptistery of Ravenna a great arch embraces three arches on the inner walls. Dr. Sedlmayr eliminates it as irrelevant by the argument that the great arch does not really belong to the columns, but rests on a projecting console, as in some Roman buildings. The principle however is there; in none of the Roman examples does such an arch embrace three smaller arches.

There is one important consequence of the embracing arch for proportionality that has been overlooked by Dr. Sedlmayr, although it reveals the interplay of two of his (otherwise unconnected) principles. In the arch embracing two or more arches, the large arch and the smaller encompassed arches often spring from a common support or from adjacent members of the same height. Therefore a given unit of height may be associated with two or more distinct spans. This bivalence of units is a common mediaeval trait; but it is already foreshadowed in late classical art where adjacent arches of different span spring from one level or surmount bays of uniform height.

The problem of proportion emerges again in Dr. Sedlmayr's discussion of the technique of the system of Justinian. He recognizes the importance of the technique of construction for the interpretation of the building, though he treats technique more as the form of technical thinking than as the total means and method of construction. After Choisy, he sees that in Hagia Sophia *tout est calcul,* and judges that in this respect system and technique are one. But we are led to ask: are they formally analogous or are they simply related as end and means? Since the building was admired in its own time as a scientific accomplishment, are we to believe that the aesthetic structure has qualities of a scientific-intellectual order? How can system and technique be analogous if the system shows no spirit of calculation, but the very opposite, in its incommensurable proportions?

These difficulties are perhaps resolved in the unintelligible section on the *Denkweise* of the building and its analogy with the religious-philosophical conceptions of the Middle Ages.

In spite of these shortcomings, the article is extraordinarily stimulating because of the problems raised, the numerous insights and the comprehensive scope. It should inspire fresh investigations of early mediaeval architecture.

3. Prof. Swoboda's *Towards the Analysis of the Florentine Baptistery* applies the method of Andreades' article on Hagia Sophia (I) to a smaller monument, but derives its categories independently. First, the author reconstructs the original appearance of the exterior which has been modified by later accretions. This original form is skilfully presented in a retouched photograph. By analysis of the fine variations and irregularities, the qualities of surface and mass, the divisions and subdivisions, Prof. Swoboda reveals the great complexity of the building as a design. He defines its Romanesque character in terms of the compact, composite structure of wall masses and the distinction of a light, outer and a heavy, inner layer within this wall. He tries also to isolate a specifically Florentine quality which is verified in other monuments of the region. Florentine are: (1) the classical orders of the outer layer, replacing the outer wall layer, yet maintaining the layer character, (2) the banded decoration which attenuates the plastic contrasts through its own surface ornament and linear effects, (3) the sketchy, suggestive, tenuous and untectonic, non-functional character of the imposed classical elements, (4) the contrast of these attenuations and linear and ornamental elements with the overt drastic assertion of the masses of the building in the corners and cornices. Prof. Swoboda observes also the precocious artistic autonomy of the architecture with respect to cult. The design is independent of immediate practical conditions, whether religious or constructive. He does not tell us, however, what it *does* depend on.

The article includes also some historical observations, which are inseparable from the preceding analysis. Prof. Swoboda shows the relation of the building to early Byzantine and Roman interiors, as well as to contemporary Romanesque works, and finally deduces a dating in the first half of the twelfth century.

4. The essay of the late Maria Hirsch on *The Figure-Alphabet of the Master ES* is unfortunately a posthumous and incomplete work. Her sensitive observations make us regret all the more the fragmentary character of this essay. It was published from her notes by the editors, and is not entirely homogeneous. The merit of this paper lies in the formulation of the aesthetic principles of Gothic script; on this basis the author proceeds to analyze the alphabet in question, one of the most typical and expressive works of the mid-fifteenth century. She studies with an admirable precision the relations of the ornament to the structure of the letters; and arrives at a valuable characterization of the artist's manner of drawing, his linear fantasy, and his mode of composition. She says very happily of his figure style that it is *zugleich maximal verklammert und maximal zerstückt.* The essay is one of the first of its kind and opens a large field in mediaeval researches, for it pertains not only to the ornament of mediaeval initials, but to all works in which animals and figures have been applied to, or fitted to, an already determined form, like a trumeau or the head of a sword, or to any terminal object. In one point the study of the adaptation seems to me to fall into mechanical and inadequate analogies—in the assimilation of the movements of the constituent figures to the normal ductus of the script. I could not verify the analysis made at this point; the directions of the figures in the K are opposed in fact to the normal script ductus; and one could infer from the nature of the style of ES that he would not practice such an assimilation. I feel also that the distinction of the two modes of alphabetic figuration, by conformation to the letter as a frame, and by approximation to the letter as a framework, while valid as possible modes, which can, in fact, be verified elsewhere, is not valid here, and is invoked by exaggeration of minor differences and by liquid subtleties.

5. The article by Dr. Otto Pächt, *Formal Principles of Western Painting of the Fifteenth Century,* deals with the relations of spatial composition to surface pattern in Dutch, Flemish, and French painting of this period, and with the distinction of national constants in these three arts on the basis of differences in such relations. He observes correctly that the formal

development of Western painting cannot be grasped through studies of space or perspective alone, that for aesthetic experience the pattern formed by the projection of the spatial elements on the pictorial surface is an essential component. Two modes of organization may therefore be distinguished within a painting of this period—one in depth, a second in surface. It is to the surface form, however, that Dr. Pächt gives the greater importance, even to the point of deriving the space composition from the mode of surface patterning. The peculiarities of perspective in Flemish art prior to the mid-fifteenth century he explains by the character of the surface design, by the will to obtain continuous, dense patterning, with analogies of neighboring elements. The depth composition becomes a sort of reversed projection of the surface into the picture. "The capacity of the pictorial space depends on the projective capacity of the pictorial surface." This is a "law" of all pictorial fantasy in the Netherlands. The silhouettes of units are close together or overlap, and one may serve as the background of the other. Hence the equality of the human figure and his surroundings, and the homogeneous character of the visible world. The decorative unity is independent of schemata or clear order, but is determined by balance and continuity of forms. Flemish art is therefore elastic and adaptable to the most varied problems of representation. These qualities are for the most part typical of early Dutch and French painting too, but with several differences.

In Dutch painting there is no *horror vacui*, no close connection of adjacent contours, but a separation or isolation of objects, and a tendency toward broad empty ground or decorative intervals. Dutch art discovers the value of free space, of emptiness and of breadth and bareness of surface. When Flemish compositions are copied by a Dutchman, they are widened, and the units separated. Dutch art therefore has plain, unarticulated silhouettes, without striking correspondences of adjacent elements—an isolating verticalism, distinct from the Gothic in that it is not the vertical which is accented or isolated, but the continuous free space between and behind the figures which is developed as an aesthetic factor. The substitute for the internal pictorial unity, destroyed by the isolating method, is the connecting gesture. New types of figures are created in Dutch art, speakers who function only as guides, and whose gestures are addressed to the spectator. Dutch art therefore has a unity involving the spectator, a *geheimes Mitwissentum*, the whole evoking a purely passive remote contemplation which in turn reflects an unconnected juxtaposition of unrelated single objects.

In France there is a third type of surface order. Surface and depth are built up according to a preëxistent geometrical schema, a system of diagonals which organizes both space and surface into a regular and clear network. This schema is not directly felt as prior or imposed, because the world that is rendered is also subject to it, because the topography, the buildings, the people, are all cast in shapes congruent with such regular and clear schematism. Hence the orderly cultivated world of French art, the lack of variety, the inexpressiveness. A preconceived form is prescribed, no matter what the subject. The slight variability of the *a priori* fixed pictorial pattern makes it impossible in many cases to realize the individual illustrative suggestions of the subject in more than a superficial way. The schemas have only slight adaptability and are relatively little subject to changes in period style. The characteristic lozenge form of composition is found in the Limburg brothers, Fouquet, and Callot. It is concrete and clear, a projecting skeleton. In French art originality is a variation on a given theme, not the invention of a new theme. Hence the inaccessibility to foreign influence except in a minor way, but the greater susceptibility to Italian art which provides regular forms.

I have taken pains to present the main ideas of Dr. Pächt as fully as a review permits, because of the rarity of thinking and observation like his in the English and American writing on the arts he deals with, and our real need of formal analysis and fresh historical generalization.

His conclusions are to a certain degree read back into fifteenth century art from descriptions of French and Dutch art of later periods—this is especially evident in his conception of Dutch art where he leans heavily on Riegl's characterizations of the painting of the sixteenth and seventeenth centuries, and to that degree one may question the adequacy of his analysis of fifteenth century art. It is for the special students of these arts to judge whether Dr. Pächt's observations have the generality he attributes to them. A layman, attentive to his method and reasoning, will observe within his subtle, but sometimes obscure, analyses an excessive tendency to centralize the aspect which interests him and to interpret it as the determining factor of the whole. The obvious interaction of the formative elements is neglected, as if the mode of perspective and the spatial design had no influence on the surface pattern, as if the manner of drawing, the particular expressive values, and the content were mainly by-products or neutral factors subject to an *a priori* surface form. Instead of studying the interrelation, functioning, and historical development of the essential aspects of fifteenth century painting, Dr. Pächt tries to *deduce* them all from a single aspect which is presented as the principle of the whole. The agreement of the perspective form and spatial representation with a particular surface pattern seems to imply for him their origin in that surface pattern or their purpose in the maintenance of just such a surface pattern. There are indeed such subordinations of aspects in art, but if formulated in a one-sided way, as is done by some German writers, we could never understand why there should be space or perspective at all. Such formalism leads to the common error, associated with the practices and theory of modern art, of assuming a one-sided relationship between formal pattern and representation, the latter existing only to effect a certain kind of pattern, itself prior to or superior to, the representation.

The historical portions of Dr. Pächt's article also suffer from the dogma of autonomous principles. His conception of the principles of fifteenth century art as constants, persisting to the present day, is historically formalistic and abstract in that the life and duration of these principles are thoroughly self-determined, independent of concrete conditions inside, or tangent to, the arts. Thus he makes the reception of foreign influences by French art and the historical mobility of the latter depend on its schematic surface form, a view which is historically inept. It corresponds to the Hegelian notion that whatever befalls a being arises from its own inner nature—as in Chesterton's story of the man whose nature it was to be shot at constantly, and whose enemies were therefore exempt from any responsibility.

It is not clear, further, what Dr. Pächt means by his formal "constants." This concept, borrowed from the natural sciences, where it has a precise and controllable meaning, is applied here in a triple sense: first, as a specific quality which persists in a given art during an

indeterminate period of time *while other qualities are changing*; second, as the formal principle of an art, the *Gestaltungsprinzip* itself; third, as the goal or ideal which the art is approaching. He assumes not merely that a given quality persists, but that this quality is a central principle, since it is from the constant that he derives numerous other aspects of the art, including even its history. To establish the first sense of his "constant" it would be necessary to indicate the historical and spatial limits in which the constant is observable, since it is predicated of historical, changing objects, like styles of art. This Dr. Pächt does not attempt to do, beyond attributing the constant to such indefinite entities as French art, Dutch art, and Flemish art; he therefore leaves the reader with the vaguest idea of the constancy of his principle and the extent of the field to which it applies. Further, since Dr. Pächt holds to a Gestalt theory of art according to which the formal structure of a work or a style is an organized whole with interdependent and interacting parts, determined by a principle of the whole, we are led to ask how a constant is possible in a historically developing art; how there can be a rigorous structural unity in a style, if the style manifestly changes while a certain principle within it, often a central principle from which Dr. Pächt tries to deduce almost everything else, remains the same. And if the constant itself changes, exactly what is meant by the "constant"? If the constant has a history, how can one pretend to establish a constant without indicating its historical limits?

Considered empirically, Dr. Pächt's method of establishing his constants is open to obvious criticism. His example of the Dutch constant is found in the work of Bouts, a painter who worked mainly in the Flemish region (and whose Epiphany, to me, is much nearer to the Flemish "constant" than to the Dutch as described by Dr. Pächt); his example of the French constant is the work of a Dutchman, Paul of Limburg. In fact he verifies the constancy of the French constant by reference to the works of Poussin, a Norman who worked mainly in Italy, and of Callot, an Italianate artist from Lorraine. In his comparisons of artists of different countries he takes little if any account of differences of generation or period to establish the constancy of national oppositions; thus he contrasts Rembrandt and Rubens, the Maître de Flemalle and Bouts.

6. The article by Michael Alpatoff on the self-portrait of Poussin differs from Dr. Pächt's precisely in his recognition of the variety, interaction and even possible mutual independence of the qualities and aspects of a work of art. This difference is due partly to the difference in subject, Alpatoff being concerned with a unique painting of which he recognizes the complexity and ultimate irreducibility, whereas Dr. Pächt wishes to discover the principles common to a class of objects and to whole traditions of art.

The self-portrait is unique in Poussin's entire production, first, as a portrait, second, as a work dealing directly with the artist. Hence the great interest of a thorough investigation of this painting of which the special character seems to have escaped the attention of previous writers on Poussin. It is, paradoxically, a self-portrait commanded by a patron. The artist is thrown back into self-contemplation, contrary to his usual practice and interest, by the will of another person. He shows himself in the middle of the picture, a realistically portrayed face of strong will and clear gaze, but surrounded by a bare wall, by picture frames and a fragment of a painting with the bust of a classical woman in profile, that is, by the professional environment of an artist, rather than by the common world of society or nature. This private world exhibits an insistent geometricality of form, rectangular shapes, sharply defined objects, which are related to the rectangularities of the artist's figure, and are dominated by it.

Alpatoff has hardly exhausted the interest of this work, but he has revealed in his short study its extraordinary complexity and its density of meanings and qualities. His study is not so much thorough as searching. It is attentive to numerous aspects and exhibits a highly developed critical sensibility, if not a systematic philosophy of art. He examines in turn the principles of formal organization in the regular divisions of the field, in the constellation of bodies, in the geometrization and framing of the parts; then the principles of the representation considered psychologically and in terms of content, the significance of the facial expression and the glance, their relation to the inert, geometrical world around them; then the interrelations, cooperative coincidence and simple juxtaposition of these principles, the social and individual factors in the qualities of the portrait, its historical position, and finally the character of our impression or contemplation, the mode of reception this portrait seems to entail in the spectator. All this is done experimentally, with insight and finesse, and with a frank admission of the limitations of these approaches and the necessary incompleteness of analysis.

Several criticisms may be made of Alpatoff's interpretation. He speaks of the symmetrical relation of the female head at the left with the artist's hand at the right, but this relation is not sufficiently explored. It is a real symmetry only with respect to an imaginary diagonal axis which twists the pattern of the picture frames. Alpatoff neglects also the possible meaning of the juxtaposition of the artist's ringed hand with an idealized female profile head, though he discusses at length the possible meanings of the head itself. The jewel of the ring, dark on light, is the counterpart of the woman's eye, and strengthens the assumption of a meaningful relationship of the opposed head and hand. He overlooks also the relation of the horizontal frames to the eyes of Poussin; the picture frames and the lines of the door seem to issue from the eyes, like a cross, and confer on them the force of a generating center. Because of material difficulties Alpatoff could not see the original painting again and had to omit all discussion of color. The interpretation depends largely on the photograph reproduced in the article. In this photograph the light and shade of the original are considerably weakened. The author therefore overlooks in his analysis the strong shadow on the lower right part of the painting. The light and shade as a whole are relatively neglected, though important in the structure of the work.

In his investigation of the interrelation and accord of principles, he admits that certain principles simply exist side by side, without discoverable interaction or accord, but he overlooks a conflict that he has himself unwittingly described. In one place he characterizes the work as a mirror portrait, as distinguished from those self-portraits in which the artist presents himself as seen by a spectator; but elsewhere he observes that the eye-level of the portrait is in the center of the field, i.e., at Poussin's chin. This discrepancy appears a second time in Alpatoff's description of the head, first, as seen from below, later, as thrown back.

In discussing the plurality of meanings as one of the principles of the work (*à propos* of the woman at the

left, who may be a muse, a sculptured bust, or a figure on the represented canvas), he refers to symbolist poetry and mediaeval theological interpretations as examples of such plurality. But here he seems to confuse: (1) the possible plurality in our interpretations, (2) the possible plurality of Poussin's allusion, (3) the modern uncertainty or unclarity about an originally definite and single meaning, and (4) the original uncertainty of the form of an object arising from ambiguities or insufficiencies in representation. Furthermore Alpatoff does not make it clear whether he is describing in this plurality a quality present in many of Poussin's pictures or a novel quality arising in this special, really unique and uncharacteristic situation of self-portraiture. He evidently identifies this plurality of meaning with unclarity, for he contrasts the character of the meaning with the un-Baroque clarity of the forms of the painting as a whole. This negative reference to the Baroque is inadequate, since the concept of clarity is relative to the field or part delimited. Thus Alpatoff discovers real or latent squares in various objects, but, as he says, no object in the picture is square as a whole, but only by segmentation, only as an incomplete or intercepted form. The unclarity, or better, the uncertainty, of the meaning of the bust of the woman arises precisely from this concealment of the greater part of the field to which she belongs.

Alpatoff indicates interesting analogies of the portrait to contemporary literary portraiture, to the psychology of the time (stoicism, the tragic heroes of Corneille), and to Cartesian philosophy (geometrically formed world, and a central thinking point). The sociological paragraphs are rather sketchy and slight, concrete social factors being neglected, and the author attending mainly to Poussin's consciousness of the autonomy of the artist and his national French loyalties. It is to be hoped that analysis of this aspect will be carried further. In the common view of Poussin as an intellectual artist, the specific content of his intellectuality, its original value and function in the concrete experience and society of his time, are substantial aspects disregarded or reduced to a system of analogies between various fields of culture.

7. It is the great merit of Dr. Emil Kaufmann, in his excellent article on *The City of the Architect Ledoux*, to have resuscitated Claude Nicolas Ledoux, a remarkable architect of the eighteenth century, who wished literally to found a new architecture. His work fell within the period of the neo-classic movement, but in him we perceive more clearly, through Dr. Kaufmann's study, the modern tendencies and aspirations of the architecture of his period. Although Ledoux was hostile to the French Revolution, his designs and his writing express more powerfully than those of any other architect of his time the moralistic, practical conceptions of the insurgent French bourgeoisie. Even in the formal aspects of his art it has been possible for Dr. Kaufmann to find analogies to the structure of the new bourgeois society. Ledoux himself was consciously engaged in a struggle with the accredited architecture of the past and conceived of his own style as revolutionary, as the beginning of a new art, adapted to a new philosophy of life. The very title of his book, *L'architecture considerée sous le rapport de l'art, des moeurs et de la législation*, which is a tendentious projection of his aims, declamatory, heroic, theatrical, points to the architectural propagandists of our time. Ledoux is, in a sense, the David of the French architecture of his age; he might have constructed the setting of the "Horatii" or the box and bath-tub of "Marat."

The article by Dr. Kaufmann deals with the city plan designed by Ledoux in 1776 for the salt-works of the king. Besides the purely practical buildings—industrial and domestic—Ledoux imagined a series of Utopian structures, houses of peace, culture, fraternity and godless religion, and even an *oikema* for the purgation of sexual passions, which suggests the literary psychiatry of the twentieth century. For Ledoux the industrial and domestic buildings, though unornamented and severe, are as important architecturally as the buildings of religion and royal power. The central building of the city plan is significantly the Bourse. In presenting and analyzing this plan (which should be studied further in relation to utopias and the visionary cities of literature), Dr. Kaufmann attempts to formulate the general character of Ledoux's art and, incidentally, of all architecture since the end of the eighteenth century (this part is developed further in his more recent book, *Von Ledoux bis Le Corbusier, Ursprung und Entwicklung der autonomen Architektur*, Vienna and Leipzig, Verlag Dr. R. Passer, 1934.). He finds the essential contribution of Ledoux in his discovery of an autonomous principle of architecture as opposed to the heteronomous nature of preceding building. By this Dr. Kaufmann means that in contrast to Renaissance and Baroque architects, who conceived of a building in terms of imposed sculpturesque, plastic, or pictorial qualities of mass and relief, or in terms of a symbolism expressing authority and hierarchical relations, the architecture of Ledoux and of modern times derives its aesthetic from the internal demands of construction and use, and is independent of any foreign, imposed artistic conception. A second distinction between the Baroque and modern styles, evident in Ledoux, is that in Baroque art the elements fuse or coalesce in terms of a higher unity differentiated according to picturesque, plastic, or hierarchical conceptions, whereas in later art the elements become independent entities combined inorganically in such a way as to maintain the clear singleness and completeness of the units. The first system Dr. Kaufmann calls the *Barock Verband*, the second he calls the "block or pavilion system." The contrast corresponds roughly to the Wölfflinian opposition of the Baroque singleness (*Einheit*) and the classic or neo-classic plurality (*Vielheit*). It is interesting that the Viennese city planner, Camillo Sitte, over forty years ago had called attention to the block character and the unorganized, additive design of modern building groups. But whereas Wölfflin and others have treated this opposition as an automatic development or reaction, Kaufmann has attempted to explain the artistic changes by specific social changes. The *Barock Verband* pertains to a feudal and absolutistic social structure in which the classes are mutually interdependent and each has a necessary, but differing, place in a transcending scheme; whereas the block or pavilion form reflects the character of bourgeois society which thinks of itself as composed of isolated, equally free individuals, each seeking his own life and subject to no transcending force that does not emanate from the will of these individuals. The latter correlation is with bourgeois ideology, not with the actual class structure and conditions of bourgeois society, and depends more on quotations from Ledoux than on a study of social and economic history. Although Dr. Kaufmann tries to establish a direct relation between the forms of society and architectural forms—an effort unique in the work of the group which publishes the *Kunstwissenschaftliche Forschungen*—he minimizes the strength of his argument by qualifying the correlation as simply a product of ideas, with little regard to the interplay of social forces and conditions. And to avoid the onus of

materialism he stops to point out that prior to the use of concrete, Ledoux already employs the prismatic support, thus showing that new forms are not determined by materials—a "refutation of all materialistic art history." This is certainly a misleading bit of reasoning, first, since the prismatic form might be determined by material conditions other than the use of concrete, and second, since a materialistic view of art history is not necessarily a theory of materials, but of the concrete historical determination of forms as against a purely immanent, automatic, logical or animistic determination.

The unexpected modernity of Ledoux—who, though born in 1736, could speak of hygiene, economy, and use as the real bases of building, could formulate an aesthetic of pure geometrical masses without ornament, and could insist on the equal nobility of all construction, whether royal, religious, or industrial—this modernity has blinded Dr. Kaufmann somewhat to the specifically eighteenth century character of Ledoux's art, and has led him to an undercritical description of the style, wherein Ledoux appears to be little less than a contemporary of Le Corbusier, and his work, which still has on it the stamp of the Renaissance, appears to be at a pole opposite everything the eighteenth century had produced. Ledoux is for the author the founder of modern architecture, and the specific individual source of the art of men like Gilly and Schinkel in Germany. It is evident from even a cursory observation of the engravings in Dr. Kaufmann's article and book and the older monographs, that the designs of Ledoux are still tied to a formal symmetry and regularity which are the very opposite of modern design and relate more to the traditional styles of the eighteenth century. Also of his time is the accented massiveness of the architectural units. In these respects we cannot think of Ledoux as a forerunner of Le Corbusier, although his work may have had a deep influence on the architecture of the nineteenth century. In his programmatic views on a new style, Ledoux makes little, if any, reference, as is to be expected, to a change in technique, to new materials or modes of construction, but only to a new style arising from simplicity, clarity, sobriety, etc. In these respects he is part of a wider movement of his time, and continues the theories of writers like the Jesuit Laugier, who in the early 1750's wished to strip all ornament from buildings and to limit columns to purely tectonic applications. But the Jesuit father believed that a new style could arise only from a revision of the forms of moldings, whereas Ledoux, standing in a closer relation to the progressive elements of his time, anticipated a new style based on a new morality or new social conditions. In his conception of the universality of architecture as a practical, yet noble, art embracing all human construction, and in his effort to provide for all possible needs in building—including the ethical, the cultural, and the erotic—and to express in the physiognomy of the individual dwelling the occupation of the owner—the façade of the hooper's house being designed in concentric rings—he displays an encyclopaedist temper. Nearer than Laugier to Ledoux, and probably independent of him, proceeding from related bourgeois values and interests, were the numerous English architects of the late eighteenth and early nineteenth centuries who published designs for rural buildings. Some of the projects in Gandy's treatise on farm-houses, published in 1805, the year after the appearance of Ledoux's book, are much closer in outward aspect to twentieth century architecture than anything in the albums of Ledoux.

Dr. Kaufmann has not yet located Ledoux clearly within his own time. We do not grasp from his analyses how Ledoux relates to the parallel tendencies in the architecture of the latter part of the eighteenth and the early nineteenth centuries. We have the impression of a purely individual innovation that arises from the conditions of the time and yet remains unique and prophetic. Similarly, the relation of Ledoux to the architecture he seems to anticipate is somewhat obscured by the failure to state the characteristically eighteenth century qualities of Ledoux. One of the important aspects of recent architecture, foreign to Ledoux, is the informality and picturesqueness of design, even in apparently regular and unornamented constructions. These qualities were highly developed in the historicizing architectures of the nineteenth century, but especially in the mediaeval revivals, which influenced so deeply many of the progressive architects of the second half of the nineteenth century. These architects asserted the values of an "autonomous" architecture in Dr. Kaufmann's sense; yet they arrived at such values, not from the tradition of Ledoux, but from the needs of contemporary society and their experience of mediaeval architecture.

It must be said in conclusion that although Dr. Kaufmann's description of the loose, synthetic composition and of the block form of Ledoux's designs is excellently made, the categories like "autonomous" and "heteronomous" are inadequate to represent the characters and differences of Renaissance and modern art, and may confuse the student of art history. Is it correct to describe the sculptural qualities of Baroque architecture as a heteronomous imposition from without? The concept of the sculptural in architecture is used metaphorically to designate an extreme plasticity, but this plastic quality in the buildings is sufficiently different from sculpture in character, in context, in effect, for us to admit its distinctively architectural nature. It is a plastic quality which could exist only in a construction; it is thoroughly dependent on the scale, materials, spaces, and purposes of a building. And in the same way, to assert that the architecture of modern times is "autonomous" is to overlook the degree to which the designs of the architect are affected by pictorialism, by the modes of seeing and drawing developed in modern, and especially abstract, painting. If a mode of life and various interests of the society of Le Corbusier suggest luxurious smooth surfaces, terraced roofs, and bare walls, must we call this an autonomy of architecture in contrast to the symbolic and directly expressive decoration engendered by the society of the Baroque period and correlative with the values and mode of life of the owners of Baroque palaces? Terms like "autonomous" and "heteronomous" presuppose that there is such a thing as an inherent nature of architecture or of building, a pure Platonic nature, apart from the individual, concrete, historical examples of architecture. When the architect subscribes to this nature, he is supposedly an autonomous architect; when he seems to draw upon other arts, his art is heteronomous. The conception of an autonomous architecture is therefore related to that idea of a "pure art" which arises constantly among artists who wish to justify the theoretical or seeming autonomy or absolute independence of their activity as artists. They know only the "laws of art," and submit to no others. In the name of a similar purity, an architectural aesthete might deduce an art which conceals or suppresses the tectonic, constructive elements as non-artistic, and which constructs independently of these factors its own effects of mass and space and light. It is as an "autonomous" architecture that Geoffrey Scott defended the Baroque.

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