IN WHAT
STYLE
SHOULD WE BUILD?

THE GERMAN DEBATE ON ARCHITECTURAL STYLE

HEINRICH HÜBSCH, 1838
RUDOLF WIEGMANN, 1829
CARL ALBERT ROSENTHAL, 1844
JOHANN HEINRICH WOLFF, 1845
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HEINRICH HÜBSCH, 1847

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THE PRINCIPLES OF THE
HELLENIC AND GERMANIC
WAYS OF BUILDING
WITH REGARD TO THEIR APPLICATION TO OUR
PRESENT WAY OF BUILDING

CARL GOTTLIEB WILHELM BÖTTICHER

It will be appropriate to the festive celebration of this day, dignified by the presence of so many highly gifted and enlightened men of art and science, if we direct our attention to one of the immediate effects of the work of the man in whose memory we are gathered here. When we consider the relation of our time to the tradition of Hellenic architecture, we find that Schinkel alone revealed Hellenic forms to us through practical work and that his influence in turn stimulated architectural scholarship and established as its first priority a thorough examination of the essence of the Hellenic style. As the fruits of
earlier artistic research testify, it was only after Schinkel's creations became known that it became possible to penetrate the essence of this art and turn its study into a science. An architect of genius today thus fulfills his appointed mission in two ways. On the one hand, by satisfying present needs through his work, he spurs others to emulate him. On the other hand, by clothing this work in a historical style and thus by seeking to elevate it to an object of history, he forces the science of art to investigate the style that, by adopting, he has clearly designated as fit for its purpose. There is no need here to preface these remarks by noting that by the science of ancient architecture we do not mean the mere knowledge of the works and art-forms that have come down to us—this we take for granted—but the knowledge of the essence and the original conception that is artistically embodied in those forms.

Yet, as we survey the benefits bestowed upon us by Schinkel's creative activity, it goes without saying that every time we remember his works we must also recollect in praise those noble individuals whose spirits nurtured his own, shaped it, and brought it to maturity. Among them we may recall with particular gratitude the name of the noble statesman and scholar who, in a time of dire need, became Schinkel's patron,⁴ who saved him for us and for his destiny, freed him from material worries, and with great kindness eased the path he was to pursue, thus enabling his genius to unfold in undisturbed purity and freedom. To such men, since departed, Wilhelm von Humboldt, Hirt, Niebuhr, and others,² we still owe a debt of gratitude today.

Considering these circumstances and the standing of a man who personifies a moment in the history of art, we must deny ourselves too exclusive a predilection for this great artist, lest we later appear to have been partisan or shortsighted, lest it be said that because the judgment of his contemporaries was biased, the generation that followed was forced to restore the integrity of a corrupted history of art in order to form an unbiased and fair appreciation of the man. Therefore, in justice to historical truth we must first of all allude to a name whose bearer still today distributes the blessings of art among the people for the good of the fatherland, as he once, through Schinkel's hand, bestowed it on those works in which a princely mind impressed the seal of beauty on a rude and barren nature and transformed a desert into a Hesperidean garden. Schinkel himself spoke of the originator of these works in memorable words, declaring that he "would have to acknowledge Him as the foremost living architect, if such a thing could have been imagined." We too would be obliged to name Him, did not a profound respect impose a discreet silence.³ Yet these very works, through the thoughts that they inspired, induced the austere art of Schinkel to change its rhythm and descend, as it were, from the cothurnus and turn to the idyll, taking up the shepherd's crook and panpipes, where, close to the Hippodrome and Piscina, beneath a leafy, Dionysian shade and beside a rippling fountain,

148. BOTTICHER
a tranquil resting place beckons the astonished wanderer, in whom it raises the desire that—like Homer's happy Lotus-Eaters—he may forget the longing to return to his dear homeland and pass the days in an eternal dolce far niente. Schinkel's works in the severe style gave us an idea of the hieratic manner of Hellenic architecture; by contrast, these works that breathe the spirit of Virgil's Georgics were the first to let us see in reality the wondrous world of Roman urban and rustic dwellings, which had hitherto lived, like myths, only in the writings of the past.

To what heights have these works raised our knowledge of ancient life and art in the short span of three decades! Indeed, what higher task has art than to touch the pulse of life and to arouse in a whole generation a longing for nobility and beauty! Only then does the artist's work become an ethical force. If the needs of a generation reveal its state of moral and cultural development, then the work itself that meets these needs will serve posterity as testimony to the culture of the architect and to the spirit of its founder. If a man deserves our praise because his work has satisfied the needs of the time, then we must above all praise one who rose higher, whose thoughts were ahead of his time, and who, by setting a nobler example, raised his generation to his own level. For this is the poet's and the artist's mission: not to serve a commonplace reality and remain within its confines but to follow a higher calling by which, heedless of the applause or censure of the undiscerning crowd, they must accomplish the task the Deity has inscribed in their hearts. As there is an occasion for every great work of art and as that occasion springs from the will of the person who determines it, works of art are truly monuments to the fame, and lasting testimonies to the spirit, of the patron, the great man, the prince, who in his wisdom has chosen these noble means to elevate the spirit of his people and to lead it away from the base necessities of life toward the great and the sublime.

Those who, in our day, turn their attention to former ages and profess the study of the life and work of past generations are often asked by those on the other side, that is, by men who live only for the present and for their own interests: What is the purpose of such activity? What, they say, can be the use of turning back to an art of the past, of adhering to its traditions, and projecting oneself into its spirit? Could the greatest discovery that might be made in this sphere or the most important artistic revelation outweigh the benefit that will result from the completion of the most insignificant present-day project? These objections are especially directed against scholarly research undertaken in connection with architecture, the mother of the fine arts, and in particular against the architectural style we call the Hellenic, which, however, was only the ripened fruit and refined result of all the styles that evolved in pre-Christian nations (if we exclude the Roman beginnings of the arcuated system). To return to origins is dismissed as a one-sided or antiquarian fancy; to steep oneself
in ancient traditions is seen as a retrograde step, a sign of inability to create anything that is new, modern, and progressive in conception.

Since the time when opinions concerning the antique and medieval styles began to be so diametrically opposed, the question of whether any benefit will be gleaned from the study of these two styles has been answered in widely differing ways. Yet these views have never touched upon the basic causes from which any judgment or comparison should start. All opinions for or against a particular style have referred only to the outer shell, that is, to the scheme of the building’s art-forms, which were considered to be identical with the principle of a style. The true essentials have never been seriously considered; the discussion has never actually turned to the source of the art-forms and of the diversity of styles, namely, the structural principle and material conditions on which each is based. And yet these two factors are crucial for any criticism. It is well known how unproductive and how far removed from what is really essential, the views expressed have been. The view that the schema of the antique style is the ideal or acme of all tectonic activity, which no style could ever surpass, has deprived the medieval style, and especially the style characterized by the pointed arch, of its due. Those who dismiss it as Germanic and barbaric overlook the enormous step forward represented by the medieval system of widely spanned spaces, with its escape from the structural limitations of material, in comparison with the limitations of the Hellenic post-and-lintel system, which was tied to a certain massiveness, short spans, and restricted forms of plan. According to those who hold the opposite view, the Hellenic is an alien importation, does not conform to our architectural conditions, and has so little impact on our emotions that we cannot possibly comprehend its forms. They go even further, cross themselves, and ask: How can we who are no longer pagans commit the sacrilege of profaning our sanctuaries by using such forms? Only the Middle Ages have given us forms that represent the Christian mind; these have entered our minds, and they are the only ones we understand; besides, they are native to our soil and represent the custom of our forefathers. As if the art-forms that express a truth valid for all times and all generations could ever be solely pagan or Christian, Hellenic or Germanic!

By presenting one style as uniquely true and valid while negating the other, each side has abolished one-half of the history of art, thus clearly revealing a failure to understand either the style that was favored or the style that was dismissed. What was overlooked was that these two styles, even though we see them as opposites, are not opposites in the sense of being conceived or created in order to cancel or destroy each other, but opposites that are complementary and, within the vast framework of the history of art, are therefore always conceived together. They signify two stages of development that have had to run their prescribed course before a third
style can see the light of day, one that will reject neither of the two preceding ones but will base itself on the achievements of both in order to occupy a third stage in the development, a higher stage than either: a third style that is destined to be produced as a matter of historical inevitability, by the age that will follow us, and for which we have already begun to prepare the ground.

Regarding the two views mentioned above, it is evident that neither can help us to decide which of the two is right and valid for the pursuit of our aim. Closer examination leads to the following conclusion. If one gives credence to the latter view, then the antique style ought to be totally removed from our artistic sphere as something extinct that does not need discussing. If—with as much right—one accepts the former view, then the Germanic style too ought to be excluded as completely invalid. As a result, nothing would be left to us; we would find ourselves alone in an immense void, having lost all the historical ground that the past has provided for us and for the future as the only basis on which further development is possible. This leads us to two conclusions. First, we must for the time being hold on to what has been directly handed down to us, lest we lose the positive assets that we now possess. Indeed, to reject or negate tradition is as impossible as to reject history itself; for even the ephemeral configurations (lately presented to us by a few so-called original artists as manifestations of their deliverance from all tradition) seem to us—in the few places where they still contain some traces of truth—to be nothing more than misunderstood and misapplied traditional forms. By contrast, we see before us grandly conceived monuments that will forever have a place in history because they uphold tradition and at the same time fulfill present needs. Second, it follows that we must not make use of tradition for its own sake; through scholarly research we must penetrate its spiritual and material qualities in order to arrive at an apprehension of the essential nature of tradition and an understanding of its forms. Only then will we be able to decide what part of tradition merely belongs to the past, was valid only then, and therefore must be rejected and what part contains eternal truth, is valid for all future generations, and therefore must be accepted and retained by us. This would be true eclecticism, the eclecticism of the spirit that reigns throughout history and through which, in a gradually accelerating development, nature conducts the essence of each thing toward its supreme and ultimate goal.

Apart from these two views, we encounter a third that counsels a reconciliation and unification of the two extremes. Those who have put forward this view would have been right had they not again merely touched the surface and based their view on a negation—namely, the negation of those things in both styles that are their inviolable qualities. Their intention was nothing less than this: to clothe the structural skeleton of the Germanic style with the forms of the Hellenic style and in this

151. HELLENIC AND GERMANIC BUILDING
way to give the arcuated system a kind of aesthetic education. They really thought to
take the perfect product of a time-honored art, which embodies and reveals the artis-
tic awareness and practical ability of a great nation, and use it like a model to be
dressed at will. This was a most wretched and foolhardy idea; it was eclecticism at
its lowest, which every time it has appeared in history has signified the relapse of a
generation from a higher plane of tradition into ignorance and license. While shame-
fully disfiguring one style by robbing it of the inborn essence of its character, they
violated the opposite style by forcing it into monstrous dress and cruelly degrading it
into a buffoon of modern art. One may ask how the retention of an old style in a new
dress could ever turn it into a new one that would embody the essence of both? Might
this bring to light an original innovation or a new structural system, or would it only
produce a hybrid form that would shamefully belie its paternal and maternal ori-
gins? Of course, something new would be produced but also something monstrous:
something possible as a form but lifeless and stillborn. If the forms of Hellenic art
had been right for the Germanic style, how did it happen—we may ask—that the
arcuated system, although starting with the forms of the Hellenic style and first
appearing in its dress, nevertheless sought to free itself from these forms in the course
of developing its essential character and in the end, apart from a few reminiscences,
cast them completely aside at the very moment it reached the highest degree of inde-
pendence and manifested itself as their perfect antithesis?

When two styles have reached a stage in their development where their
essential characters are fully expressed and are shown to be diametrically opposed, as
in the case of the Hellenic and Germanic styles, then any eclectic transference of
forms from one style to the other, because it stems from a deficient sense of the essen-
tial character of both styles, will in turn produce only senseless forms that by their
contradictions destroy each other. History itself has marked such an attempt as a
destruction of everything that makes architecture into an art. Wherever it has made
its appearance in architecture, it has signaled the death of the idea of form. A similar
process has taken place three times, and three times it has had the same result. Each
time a generation has chosen this expedient, it has been hurled from the height that
it had attained with the help of tradition down to the lowest level of form making; to
the stage where chance reigns instead of necessity, arbitrariness in place of law.

The first example of this process was the way in which caves were hol-
lowed out in India, which started after Hellenic art had reached its culmination.
This practice cannot be called architecture, because, notwithstanding the enormous
expense of energy that was involved, so impoverished was the creative invention of its
makers that they were incapable of producing a free-articulated structure; in their
indolence, they blindly surrendered to the fortuitous shape of their raw material.
When we look at these vast and depressing caves, their monolithic surfaces covered with lifeless, bizarre, and distorted schemata of the structural components and art-forms of the Hellenic style, we realize that history has displayed these works to show how far a nation’s artistic understanding can sink below the level of a consciousness that it has either never possessed or else corrupted and permanently lost. Yet some people have seen in this Indian manner the origin of all styles, from which the conscious art of the Hellenic style might also have arisen.

The second example of such a process of architectural transformation is the Arabic style. Being incapable of grasping the essence of the antique style, the Arabs incorporated into their phantasmagoric art only the spaciousness that gratified their pursuit of enjoyment. Yet they destroyed its art-forms by covering the structural skeleton, carpetlike, with the geometrical patterns of their own floral world, thus overlaying their buildings with an opulent but meaningless coating.

The third occasion was during the fading years of Germanic art, at the time of the so-called Renaissance, when misunderstood antique forms were adopted to clothe buildings in the Germanic style. No lengthy critique of such a meaningless welter of forms is called for: the senseless and bizarre formations that were produced are too well known and too displeasing. This purely luxurious art, which stood in the service of princely profligacy, and which therefore frequently disposed of abundant resources, regrettably expresses little but an enervated lust for shallow pleasure that has outlasted mental capacity.

Therefore, this third school of thought, which counseled compromise as the source of a new style, also remained tied to the surface of things. No one realized that the origin of all specific styles rests on the effect of a new structural principle derived from the material and that this alone makes the formation of a new system of covering space possible and thereby brings forth a new world of art-forms. This third view does, however, show rather clearly that architects at least still acknowledged the need for tradition, although only in the superficial arrangement of its schemata. The outcome of all this arbitrary selection and rejection was, in fact, to refer us back to tradition. We were forced to accept and to take cognizance of tradition. Obviously, one has first to comprehend the particular structural principle of an architectural system, as well as the significance of each of its individual forms, before one can use it as a means to express one’s own ideas, let alone lay down an absolute law for the use of its art-forms.

The situation would be different if we were to accept the validity of the two aforementioned views while disallowing any mutual negation, so that both styles and their forms could exist with their well-deserved historical rights untouched. This would entail continuing with tradition and making use of it wherever it could

153. HELLENIC AND GERMANIC BUILDING
be of help in resolving modern issues, until in the course of time a new and more satisfactory style would arise that could then take the place of the traditional one. This, as can be clearly demonstrated, would be the course that would promote the evolution of art.

How does a new style arise, and how does it define itself in terms of principle?

The essence of any particular style is indicated by the system according to which the covering of a space is articulated into parts or structural units. For the possible form of an enclosed space is contingent on the possible form of the covering, and both the overall plan and its particular layout depend on the organization of that covering. With all styles the covering is the factor that determines the placing and configuration of the structural supports, as well as the arrangement and articulation of the walls by which space is enclosed, and finally the art-forms of all these parts related to it. Therefore, the covering reveals the structural principle of every style and constitutes the criterion by which to judge it. What comes first with any style is the development of a structural force that emanates from the material and, as an active principle, permeates the system of the covering. Only three structural forces can be used architecturally: they are inherent in the material, and in technical parlance they are known as absolute, relative, and reactive strength, or as the forces resisting tension, fracture, and compression. The secret of the structural dynamics of a material lies in its texture, that is to say, in the law of atomic order. The degree of coherence that makes the material suitable for building purposes depends on this law. In the unformed state of the material, these forces are dead or latent. The material is aroused and compelled to demonstrate its structural strength once it has been given a form that is appropriate to it and at the same time fits it to perform a space-creating architectural function: in other words, once it has been formed into architectural members. These represent the forces on which the system of covering—that is, the architectural system as a whole—is based. Yet the three forces are not equally strong in every kind of material. Therefore, when using a material, the inherent force and its strength must be investigated. From this knowledge automatically follows the law that lays down how the material should be formed to fulfill its specified function. In this way the structural form of the architectural part is determined, and the nature of the material is mastered and made useful. It was through such a process that relative strength became the active principle of the Hellenic system of covering, and reactive strength that of the vaulting system.

This structural subjugation of the material is at the root of all architecture. That is why this art has an advantage over sculpture and painting and is invested with a higher degree of practical independence than the two other arts. While archi-
tecture must first be victorious in its struggle with the material and, without a model as a guide, must establish a spatial system before it can enlist sculpture and painting to embellish it with art-forms, these two arts proceed straightaway to the representation of ideas by using familiar analogies taken from the outside world. Winckelmann and Schelling have shown that it is quite possible to comprehend the law and innermost essence of sculpture and painting without being a practicing artist; but the author of Die Baukunst nach den Grundsätzen der Alten [Architecture According to the Principles of the Ancients] and, following him, many authors of similar books have shown that nobody is able to enter into the material principle of this art and clarify the cause and meaning of its forms without having passed through a practical training in architecture and having become fully conversant with the subject.¹

Every creative generation that has given birth to a new style has had to start from the beginning with this process of mastering the material. Any generation that has failed to do so, resting content with a traditional, ready-made style, has had no chance of inventing a new style. The need to start the process of formal creation from the beginning is an eternal law imposed on any generation destined to create a new style, a law from which it cannot escape. Although this law is first felt only as an unconscious urge, it will be clearly comprehended once it becomes a fact: that is to say, once it has passed from a mere idea into reality. Every generation that has such a destiny must therefore return to the beginning and start anew the process of developing the structural properties of its chosen building. However, this does not mean developing the same force that has been previously developed but another that lies still undeveloped within the material. Otherwise, man would, like Sisyphus, be condemned to a life of endlessly and fruitlessly repeated labor without ever reaching his goal. This is why history and tradition have, for man’s benefit, preserved monuments that enshrine the principle of each style—the result of the processes that have gone before—so that on careful examination we may know what has already been developed and garner what will be fruitful. This is also the reason why beneficent nature has destroyed whole styles, except for those things that contained the germ of something new and superior, covering with an almost impenetrable veil all else that was valid only for the past. In this way, nature has contrived to force the following generation to become more independent and to seek in the still visible traces of the past for its true essence, not by groping around blindly but by consciously identifying and subordinating to its own style all that remains hidden.

Such are the blessings of tradition. For if history had found fulfillment in Hellenism, the Middle Ages would not have come about; and had the latter terminated the evolution, mankind would have come to an end. Should we find ourselves suddenly deprived of all the creative energy so lavishly accorded to earlier genera-

155. Hellenic and Germanic Building
tions, we would be overcome with melancholy, if history had not clearly shown that there is an inner force that constantly produces something new and that the process of development by which one aspect of architecture became prominent with the Greeks and the opposite aspect with the Middle Ages must be continued by a future generation in a synthesis of both. Yet the joy of victory and the bliss of creating something new can be experienced only by a generation that is strong enough to endure the toil of mastering the material and the effort of exploration. If, however, it indolently shuns such toil, indulges the senses, and lazily rests on the soft bed of tradition, then there remains for such a generation only the shadow of the creative bliss that the previous energetic generation enjoyed in full—only the dross, so to speak, from which the precious metal has long been smelted away. Can one call one’s own what is only the theft, the indolent appropriation, of someone else’s mental property? How can anyone who takes a thing that is finished and complete in itself and merely peels away the husk of form speak of creative inventiveness? It makes no difference whether one makes eclectic use of the schemata of the art-forms or of the structural systems and spatial forms: neither will serve to conceal a lack of ideas.

The opposite to these eclectic pseudostyles was the work done by the energetic generation that was destined to contrast the Hellenic with a new style and to wrest from the material a new structural principle with which to create a space-covering system far superior to that of the Greeks. This was the generation that introduced into Roman architecture the arch and the vault that later evolved into the Germanic style. This generation went back to the beginning and started the process of developing the material anew; it bore the toil of mastering the material and fought its way to victory. Unable to find an art-form compatible with the new structural principle that was then still in its budding stage, the Romans used the traditional Hellenic forms and maintained them within their arced system. Yet these forms could not fulfill their new function; with the exception of those forms unrelated to the spanning of spaces, they had become an anomaly. In a system of covering that uses monolithic beams, relative strength is the sole active force; and in the Hellenic style this was clearly symbolized by the art-forms that adorned the architrave and upper parts of the entablature. These forms, characterized by relative strength, were therefore in conflict with an arch composed of many blocks, because with the arch reactive strength is the force that alone conditions the forms through which it can be adequately symbolized. The Hellenic schema was thus continued in a traditional yet completely illogical way.

The Hellenic art-forms gradually disappeared; they were finally eliminated from the system when structural explicitness came to be the aim. Only faint traces of the Hellenic element remained in certain parts of the Germanic style. Yet
whether this style with its emancipation from the material—leading to a withdrawal from nature and the sensory world—replaced the Hellenic art-forms with others of equal value is a question to which we can only respond with a definite “no.” With regard to our perception of style, the Middle Ages differ from antiquity. The works of the Christian style are still before us; they still serve the same purpose as when they were built. Their ethical and functional significance hold no mystery for us, and the structural system in all its evolutionary stages is clearly displayed: all it needs for a full perception is our willingness to see. It is quite different with antiquity. Not only have very few of its buildings survived—and these only in scarcely recognizable remains—but the arrangement and particular function of the interior is still hidden from us behind an impenetrable veil. We have neither the ability nor the desire to return to Hellenic art, because this would mean regressing by more than two thousand years at least. But it would be equally impossible to breathe new life into Germanic art. To seek to continue with either style would mean trying to perfect perfection. Both styles have had their existence and will never exist again. And yet another art will emerge from the womb of time and will take on a life of its own: an art in which a different structural principle will sound a more ringing keynote than the other two. Another style will be born but only after the other two have made their contributions. Because this style will have its origin and its basis in the principles of the two other styles, it cannot exclude either of them; but it will embrace both and allow them to serve it jointly.

Is it possible for yet another new style to be developed in addition to these two traditional styles, one specific to our generation, in which a structural force different from that of the other two styles acts as the principle of its system of covering? And what force would be its active principle? In view of what has just been said, it is possible without needing the gift of clairvoyance to answer this question. As always with things that are still coming into existence, no more than hints can be given, although there are clear indications that the beginning has already become a reality.

Aside from the fact that a single person cannot promulgate a style and that only a whole nation can cause its inception and a whole epoch suffice for its development, the truth of the matter can only be as follows.

Our contention that the manner of covering determines every style and its ultimate development is confirmed by the monuments of all styles. Equally evident is the truth that from the earliest and roughest attempts to cover spaces by using stone, to the culmination represented by the Spitzbogen vault, and down to the present time, all the ways in which stone could possibly be used to span a space have been exploited, and they have completely exhausted the possible structural applications

157. Hellenic and Germanic Building
of this material. No longer can stone alone form a new structural system of a higher stage of development. The reactive, as well as relative, strength of stone has been completely exhausted. A new and so far unknown system of covering (which will of course bring in its train a new world of art-forms) can appear only with the adoption of an unknown material, or rather a material that so far has not been used as a guiding principle. It will have to be a material with physical properties that will permit wider spans, with less weight and greater reliability, than are possible when using stone alone. With regard to spatial design and construction, it must be such as will meet any conceivable spatial or planning need. A minimal quantity of material should be needed for the walls, thus rendering the bulky and ponderous buttresses of the Spitzbogenstil completely superfluous. The whole weight of the covering system would be confined to vertical pressure, that is, to the reactive strength of walls and supports. Of course, this does not mean that the indirect use of stone vaulting, especially the system of ribbed and stellar vaulting, will be excluded; on the contrary, the latter will be widely used. But it does mean that, for those parts on which the whole system rests, another material will be used, one that makes it possible to transfer their structural function to other parts in which a different principle operates. It makes no difference whether the members to be replaced are buttresses or members that support the ceiling, such as ribs, bands, etc.

Such a material is iron, which has already been used for this purpose in our century. Further testing and greater knowledge of its structural properties will ensure that iron will become the basis for the covering system of the future and that structurally it will in times to come be as superior to the Hellenic and medieval systems as the arcuated medieval system was to the monolithic trabeated system of antiquity. Disregarding the fragile wooden ceiling (which in any case cannot serve as a comparison) and using mathematical terms, one can say that iron is indeed the material whose principle, yet unutilized, will introduce into architecture the last of the three forces, namely, absolute strength. In particular it will be active in those anchor bands that will replace buttresses and flying buttresses. In this way, absolute force will be established as the guiding principle of the system of covering. Therefore, if relative strength is the principle of the classical trabeated system and reactive strength that of the arcuated system, then the system of a vaulted stone covering with iron ribs can adopt from the arcuated system only its relative strength, to which—as its defining feature—it must add the absolute strength of the anchor bands. The relative strength of iron beams, replacing those made of stone in the trabeated system, can play only an indirect and minor role; to replace the Hellenic trabeated stone system with a trabeated iron system would represent only a change of material, not a change of principle. It would lead to one-sided and very limited progress.
and would prove as inadequate as stone beams for spanning wide spaces.

The structural principle is thus to be adopted from the arced system and transformed into a new and hitherto unknown system; for the art-forms of the new system, on the other hand, the formative principle of the Hellenic style must be adopted in order to give artistic expression to the structural forces within the parts, their correlation, and the spatial concept. This alone will create the true mediation, the right synthesis of the two preceding styles. In what manner and by what art-forms the structural and spatial character might be expressed within this newly formed system is a question that the thoughtful person will not find too difficult to answer. Nor is it necessary to say that it is technically possible to protect the forms of the iron parts against rusting with a tin or copper-plating process or that this coating should be sufficiently thick to outline the forms clearly in a way appropriate to each part of the vault.

To return to our theme: we have said that the acceptance and continuance of tradition, not its negation, is historically the only correct course for art. There is indeed a spirit alive within our generation that urges it in this direction in spite of all subjective and speculative ideas and holds it to this traditional course, leading it toward the destined emergence from tradition to a newborn, original, and unique style. In answer to the objection raised earlier as to why we still cling to tradition instead of striving for an original and completely independent style, we need only refer to the present state of the arts to prove that those who have challenged such fidelity to tradition or who have done no more than counsel a superficial accommodation are the last persons who could ever invalidate tradition and become the pioneers of a new era. If we contemplate developments in art, we find tradition and nothing but tradition, be it the tradition of the ancient world or that of the so-called Christian world. Nowhere can we see anything that transcends tradition, neither with regard to the original art-forms nor to structural systems, unless the first beginnings of a covering system in iron are taken into consideration. All our art-forms and ideas are rooted in the tradition that we have accepted and in which we move, although often unaware of it. Well may those to whom the positive values of the past seem like shackles desire to shake them off and to destroy tradition; but it still has not been established what we can put in its place. On the contrary, despite recent attempts on the part of some people, ignorant of the essence of art, to repudiate tradition, it has emerged in all its grandeur and splendor.

Spiritual progress can come about only through a clear perception of what already exists. As each generation presses forward, it must look back to what has been already created in order to become aware of a new truth, to accept what exists, and to develop it further. For this reason, when Raphael Sanzio painted the

159. Hellenic and Germanic Building
Christian Virtues, he depicted Truth with two faces—one in the full bloom of youth, seeking to recognize itself and the present world in the reflection of reality, and the other an aged face that looks back to its origins and to the past, the source of all that exists, and shows a foreboding of a future state.

Having accepted tradition in architecture and recognized it as an undeniable fact, we should not, of course, stop there and adopt only the schematic plan, since this would mean that we would maintain the outer shell and not pursue, as we ought to do, the living spirit and essence of tradition. To reach the essence of tradition, we should not stop even when we come to what seems to be the last element but must go back to the one that preceded it and gradually ascend to the very first element and so penetrate to the source from which traditional ideas have sprung. If it is true that the style of the Middle Ages and the arcuated system in general already constitute the second stage of all architectural evolution—one that could appear only after the styles of antiquity had gone before—and if the origin of the medieval structural system is to be found in the Roman world, while the Roman art-forms are rooted in the Hellenic style, then we cannot remain with the traditional forms of the Middle Ages but must turn first to the Roman style to look for the origin of the arcuated structural system and then go back to the Hellenic style. If it is impossible to understand the Roman style without understanding the Hellenic style, then one cannot apprehend the essence of the Middle Ages without first apprehending the essence of the Hellenic style. This alone will reveal to us wherein the Germanic style is superior or inferior to the Hellenic style.

We have reached a point in our deliberations where the man whose name marks today’s celebration brings his great authority to bear on our main theme. Schinkel’s creations were destined by providence to guide his generation toward the right path of artistic development. In fact, the most important part of his appointed mission was to carry us beyond the tradition of the Middle Ages and lead us to the original source. He alone was capable of guiding us toward knowledge, because he himself sought only knowledge and did not lose himself in mere sensuous impressions. Moved by the grand monuments of the Romantic period, he too built in the Romantic style. He relived the Middle Ages in the warmth of his imagination, but he also penetrated it with his intellect. His designs of that period demonstrate this. Yet he could not stop there; his intuitive spirit urged him to probe deeper toward the original source. In time, after he had passed through this phase, his sensibility led him to see that the consecration of all art can derive only from the source from which the Middle Ages too had sprung.

Although the accounts of writers such as Stuart, Mazois, and others had contributed before Schinkel to the knowledge of Hellenic monuments, it was
Schinkel's work alone, as an instrument of history, that led to the true perception of the Hellenic style by revealing to us its spatial and structural qualities in those of his buildings that followed the Hellenic scheme. These are the two qualities by which architecture differs from the other two arts. Whereas the painter finds fulfillment in a graphic representation on a flat surface and the sculptor in a form that can be enjoyed from the outside only, architecture employs both of these means to create enclosed space. Since the essence of architecture resides in its unique capacity to present the idea and set forth its theme through this structural-spatial combination, it follows that a work of architecture can be fully comprehended only if looked at and enjoyed spatially. This impression, however, cannot be fully gained either in a graphic representation or in a model but only through the presentation of the work on its true scale.

It is therefore evident that it was through Schinkel's work that the Hellenic tradition found a new home in our country. While Schinkel reached the immediate aim that he had set for himself, at the same time both he and his buildings had an invigorating and instructive influence on the historical study of art. He impelled us to consider in detail the style that he presented and to subject its principles and its ultimate origin to critical examination. But in truth this reproductive presentation still left us dissatisfied, because neither the structural principle of the style nor the idea underlying its forms was thereby revealed. These matters remained as obscure as they had been before. The thoughtful architect could not rest content with the fact that an artist as great as Schinkel had recognized this style to be the right style: he had to look for the reasons that had induced Schinkel to present it to us as the correct and valid one. Schinkel's works do not help us here. We cannot even judge whether Schinkel, when he allowed himself to deviate from the antique system, did so in conformity with ancient laws or not. He never wrote or spoke about it but simply displayed the antique forms. All we have from him in the way of instruction are the Vorbilder für Fabrikanten und Handwerker [Designs for Artisans], which do not even touch on this important problem. According to Schinkel himself, the aim of this publication was to illustrate for the building tradesman the various parts of the Hellenic architectural system; yet even here he did not offer the explanations that at that time were already to be found in archaeological books. Thus, we still lack an explanation. Yet we cannot and must not leave it at that but must turn from Schinkel to the original source from which he drew, so that we can arrive at a full understanding. This is an indisputable necessity. Although Schinkel's works have helped us to rise above the fraud of eclecticism in general, they still have not helped us to get past eclecticism in particular, as applied to Hellenic art itself. Recent buildings show that eclecticism has become markedly more prevalent and that the beautiful proportions and exquisite taste that are the characteristic features of all of Schinkel's works have
already lost much of their influence. When, in addition, persons who profess to teach
architecture invoke the principle that out of respect for antiquity we may freely use
and imitate ancient forms even if we do not understand them, then the trend in recent
art and art theory can clearly be seen.  

Yet where will this purely manual dexterity lead when nothing is left to
"eclecticize," when the forms of Schinkel's works and those of ancient monuments
have been used up like so many transfer pictures? Perhaps to a reiterated Renais-
sance! Let it not be said: "Why trouble with research? The elect will find the answer
given to them in their sleep!" Certainly, but "to everyone that hath shall be given,"
and another saying is "Who does not prepare the lamp, will never see the bride-
groom." Knowledge alone leads to conception; only imaginative inquiry inspires
thought and invention.

A direct examination of tradition thus being necessary, we must make
a critical analysis of the monuments with regard to tectonics, construction, and artistic
appearance, and we must seek out and make use of the aid that ancient literature
can provide. Since architecture in all its different manners and forms emanates from
the artistic consciousness of the generation that created it and is like every fine art
only a mute manifestation of that consciousness, the relevant facts of the litera-
ry record must confirm the results of our examination of the monuments. We need the
testimony of the ancient authors that the significance we ascribe to these forms was
really the one that the ancients themselves originally attached to them. In order
to test our findings, we must bring together and compare what both sources— lite-
ature and monuments— have transmitted and make up from one what is missing in
the other.

Apart from the manner of how to enclose space, the first matter that has
to be dealt with in our examination is the concept that lies behind the spatial organi-
zation of the building. It is self-evident that only the history of the religious and moral
life of the Hellenes can provide some information on this. The understanding of
ancient monuments starts with historical sources. Indeed, how can we explain the
spatial form and arrangement of the temple, if we do not know the ritual of the cult
for whose performance it was intended or the sacred objects for whose safekeeping
the room was designed? All explanations given so far are nothing but oft-repeated
conjecture. The reason for the interior and exterior arrangement of the hieron
has remained hidden behind a dense veil. Again, how can one possibly know the pur-
pose of the living rooms of a house without first finding out about the domestic life
and habits of its occupants? Our lack of progress in this matter is shown by the fact
that we are not even sure of the relation of the atrium to the caveaedium, which after all
affects the main room of the house.
Here the experience of the practicing architect is useful in the elucidation of the technical factors. The aim is to grasp the principle of the statics and construction and the law and form of each part of the structural system that characterizes the style in question. Once this is understood, then the key is found to the riddle of the art-forms that have been applied to these parts as a kind of explanatory layer. Since these parts have been made for the sole purpose of creating a spatial structure, any forms applied to them that do not serve this material purpose can only have been intended to symbolize this function and to make visible the concept of structure and space that in its purely structural state cannot be perceived. Therefore, the structural member and its art-form are initially conceived as a single whole. The architectural system in its purely structural form is a technical product; these perfected forms give it the artistic stamp. The structure itself is an invented form without a model in the outside world; the art-forms, though they too are mental creations, are taken from what exists in the outside world.

In this respect (in the creation of art-forms), architecture has common roots with the two arts of sculpture and painting and follows the same principle, although it joins the rank of representational arts only after it has fulfilled the material nature of its task, related to structure, and has invented a system of enclosing space. The only way in which the two fine arts can express ideas is by applying the metaphorical method of pictorial language, in which pictorial signs or artistic symbols take the place of the idea. Pictorial art cannot represent an idea as such, but must represent it through a symbol and thus embody it. Architecture follows the same method. It takes its symbols and art-forms only from those natural objects that embody an idea analogous to the one inherent in the members of the architectural system. Therefore, an idea for which no analogue exists in the external world cannot be represented by pictorial art nor for that matter by architecture. The essence of pictorial art and its relation to nature rests in this interaction between concept and object, between invention and imitation.

With regard to art-forms in general, their meaning can be explained by the general law of formal creation, the law that governs the evolution of all natural forms and by analogy also the forms of buildings. Yet neither the former proof of their essential nature, by reference to nature herself, nor the latter, by reference to art, can be universally valid, because there can be ideas that in themselves are true but that nevertheless have no relevance to the particular matter to which they are applied. If, however, it emerges from the written record that both agree and that the significance of the forms as deduced from the monuments is confirmed by ancient literature, if all the evidence of the art-forms—including their latest, almost unthinking uses—points to this meaning, then the inference has been documented as histori-
cally correct and becomes an irrefutable truth. The searcher has the great satisfaction of knowing that he has made no incorrect inference. Even the greatest authority will be unable to dispute the result. Since the research has been freed of all subjectivity and firmly based on science, only science can either prove it to be invalid or, when corrected or rather corroborated, recognize it as the simple truth. A summary rejection is no longer possible.

It is true that there are people who are not fond of science. They are of the opinion that they can easily succeed without its help and suppose themselves to have conquered the domain of art theory merely through their technical knowledge or, at best, through the adoption of some schematic view. Not only do they seek to exclude science as much as possible as a means to knowledge: they wish to reject it outright. Science, the tutelary spirit that guards all things positive, is for them not only a great nuisance but also a dangerous enemy, because it constantly contradicts their assumptions (which, of course, never go beyond mere hypotheses) and always seeks to hold the fanciful flights of their artistic imagination down to the level of mere fact. The adherents of this movement, who see things only by halves, are like those one-eyed Arimaspians of the ancient myth, who did constant battle with Apollo’s griffins for the possession of the god’s golden treasure but who never vanquished them or took possession of the hidden hoard.

That we shall reach our goal through research is supported by irrefutable evidence. Any doubts that might remain will vanish if we glance at the period prior to Schinkel’s works, a period when the greatness of an architect was measured by his ability to achieve effects by putting together the superficially attractive motifs that were used ad nauseam by the Italian and French architects on their facades. It was a sign of Schinkel’s upright character that he always despised such a practice as a means to win the sympathy of the crowd and never used what is called the picturesque element in architecture to embellish his buildings, although he well knew how to do so and made full use of it in his designs for architectural dioramas and theater decorations. Remembering the ethical demand to be sparing in means (what the Hellenes called sophrosyne), he felt that a work of art in which the pure idea had passed unblemished into form had already attained fulfillment and that any additional form would, like an empty phrase, only harm it. We reject the idea that Schinkel’s genius would have received an equal stimulus without the scientific revelations that preceded it. Must we not admit that it was through the research of Winckelmann that we experienced ancient sculpture reborn? Schinkel himself often confessed how much he treasured the work of Hirt on the history of art. Truth can only be attained when the full knowledge of the architect’s practical work unites with that derived from methodical research. The goal cannot be reached through one of these activities.

164. BOTTICHER
alone. On the one hand, research is the only path to the understanding of the spirit that permeates the types of the extant works of antiquity; on the other hand, only ful knowledge of practical work can provide the key to the causes that gave rise to the architectural system of the Hellenes.

While penetrating in this way the essence of tradition, we simultaneously recapture an awareness of the principle, the law, and the idea inherent in traditional forms; destroy lifeless eclecticism; and once again tap the source of artistic invention. Unthinking veneration of those ideal art-forms, veneration that rests solely on the sensuous conception of their beauty, will be replaced by the clear perception of the causes of that beauty. It may be that those afflicted with the superficial mentality of today will dissent; but the time is not far distant when they will have to concede and accept what is right. The literary work bequeathed to us by the ancients is the holy scripture of their art. That is why practical work must always go hand in hand with scholarship, so that the latter provides the practicing architect with information he cannot obtain otherwise. As a great philosopher has said: only when practice and learning are joined can a learned practice arise; and that alone is art. Schinkel's genius and work vouches for that. I can only repeat what I once said to my friends of the Architekten-Verein:

Ancient art is like a beautiful musical instrument, created by a great nation of poets in order that its harmonious sounds might arouse the dormant forces of nature and join them in a new and higher order. It is an instrument by whose sounds, according to the legend, the temples and walls of Thebes of the Seven Gates formed themselves, stone by stone, in the right rhythm and right form. Yet it is an instrument that has been silent for hundreds of years; since the passing of that race, its touch has been forgotten. But if ages later, men of kindred mind discover the way in which the instrument was used and resolutely strike the chords, then once again the raw stones will form themselves into new and magnificent creations never seen before. As Memnon's statue is said to have greeted the return of his mother Eos with clear sounds, so did Schinkel's hymn in the name of the German nation greet the returning dawn of that original art as it arose in a new manifestation.

We should therefore keep to Schinkel's intentions and firmly pursue the course that he was the first to take, especially those of us who by virtue of their great intellectual gifts and good fortune have attained the splendid, yet arduous position of

165. Hellenic and Germanic Building
leaders of our artistic activity. They will be a model worthy of emulation, as he was; and, by their example and works, they will enlighten a younger generation more than the most selfless devotion to art theory and art education could ever achieve. Then—just as the Hellenes said that the nightingales nowhere better loved to build their nests and nowhere sang more sweetly than at the spot where Hesiod's urn was placed—the Germans may one day say that nowhere in the world does one build with greater distinction and nobility than in the city that houses the honored tomb of Schinkel.

Source Note: Carl Gottlieb Wilhelm Bötticher, "Das Prinzip der hellenischen und germanischen Bauweise hinsichtlich der Übertragung in die Bauweise unserer Tage," Allgemeine Bauzeitung 11 (1846): 111-25. (This is the text of a commemorative address given on the occasion of the birthday of Karl Friedrich Schinkel [1781-1841].)

Translator's Notes

1. The "noble statesman and scholar" was probably Wilhelm von Humboldt (1767-1835), the Prussian envoy in Rome, Vienna, and London and an eminent philologist whose works were influential in developing comparative philology. Humboldt was Prussian resident minister at the time of Schinkel's first stay in Rome in 1803. When Schinkel returned penniless from an expensive tour of Sicily, Humboldt "saved" Schinkel by helping him obtain funds from Berlin. It was in fact the minister Graf von Haugwitz who responded to Schinkel's urgent entreaty by sending him money immediately. See Maria Zadow, Karl Friedrich Schinkel (Berlin: Rembrandt Verlag, 1980), 14.

2. Aloys Ludwig Hirt (1759-1837) was an archaeologist and from 1796 a teacher at the Bauakademie, where two years later Schinkel became his pupil. Hirt was an outstanding representative of dogmatic classicism. Berthold Georg Niebuhr (1776-1831) was a diplomat and historian. His main works deal with Roman law and history.

3. Bötticher was referring to the king of Prussia, Friedrich Wilhelm iv (1795-1861), whom he thought it not proper to mention by name. For that reason he capitalized the pronoun, a spelling that, unless it refers to the deity, is as unusual in German as it is in English. In the same way, the word Gründer (used by Bötticher a few lines further down) is in this connection a strange expression in German. Therefore it is translated literally by using the word founder, which is equally strange in this context.

Friedrich Wilhelm (who only succeeded to the throne in 1840) not only took great interest in architectural matters but had an almost professional understanding of the problems involved in the various building projects that he wished Schinkel to execute. Schinkel fully acknowledged how much he owed to the Crown Prince's stimulating suggestions (A. von Woltzogen, Aus Schinkel's Nachlass [1861], 3: 377-78). On Friedrich Wilhelm's work as architect, see Ludwig Dehio, Friedrich Wilhelm