1　INTRODUCTION: WHY SURFACE ARCHITECTURE?

Production and representation are in conflict in contemporary architectural practice. For the architect, the mass production of building elements has led to an ever-increasing source of materials from which to configure an architectural project. The built outcome of such a configuration largely results, however, in representations that oscillate between visual reflections of systems of production and pictorial recollections of earlier styles and motifs. The first practice mimics machine assembly—reproduction—and the second pictures an architecture based on earlier and outdated modes of construction. These practices are problematic in two senses: buildings that relinquish their appearance to the image that results from assembly processes neglect the *project* of representation, and the picturing of historical profiles in nostalgic recollection ignores the opportunities for new configurations based on the availability of both new and old materials and methods of building construction.

To speak of the project of representation is to recognize the problematics of appearance. In one sense this is not a new phenomenon specific to contemporary architecture. After all, the discussion on the question of style, epitomized by such texts as Heinrich Hübsch's *In What Style Shall We Build?,* had already begun in the nineteenth century. Yet the arguments concerning contemporary architecture, its construction in general, and its appearance in particular have not given this topic the same degree of attention. Furthermore, there is a greater ambiguity regarding the parameters for such a discussion today. Architecture's becoming, the correlation between its processes of construction and its appearance, has to be reconsidered. In this context, representation cannot be limited to the communicability of the image.

A good example of this conflict between construction and appearance is the work of the American architect Albert Kahn. His is an architecture that vividly demonstrates the symmetrical but divided commitment to production and representation that has come to be typical of our time.

Kahn is best known and frequently praised as a designer of factory buildings during the early part of the twentieth century. But this type of construction was not the only one that occupied his attention, nor one that he saw as essentially architectural, despite the way apologists for high modernism have interpreted his buildings. Throughout his long and exceedingly productive career, Kahn never doubted the distinction between what he called the art of architecture and the business of building. Projects he would have included in the former category were his designs for churches and synagogues, schools, libraries, residences, and so on. Examples of this kind of work fill about half of his 1948 publication of his own works. Projects he included in the latter category, the business of building, are factories of all sorts, production buildings, boiler houses, and other examples of industrial architecture—ironically, the only types of buildings included in George Nelson's 1939 publication on Kahn's work. If we compare the designs in each category, the distinction between architectural "art" and "business" could not be stronger, nor more obvious; the latter accommodates and conforms to the logic of industrial production, the former to the aspirations and conventional motifs of representation. The clear separation of these tasks was not new to Kahn, however; it was already common in the nineteenth century, in the context of industrialization when new typologies, such as the railway station, had to mediate between the products of industrialization and the public realm—between engineering and architecture.

Even though it has become common to interpret the alternative between industrial production and representation in stylistic terms, such an understanding can be misleading, since it assumes that architectural solutions to economic requirements have their own style, the modern style. Albert Kahn never saw his factory buildings as possessed of a style, one that would be for modern times what the Renaissance and baroque manners had been for earlier epochs. The exception to this, perhaps, would be the front part of his factories, the part that housed the entry lobby and offices for the managers, which were given treatments that exceeded the requirements of functional concerns—they were "streamlined."

In his forceful criticism of modern architecture, Albert Kahn rejected the premise that the new architecture of steel and glass would be adequate to the
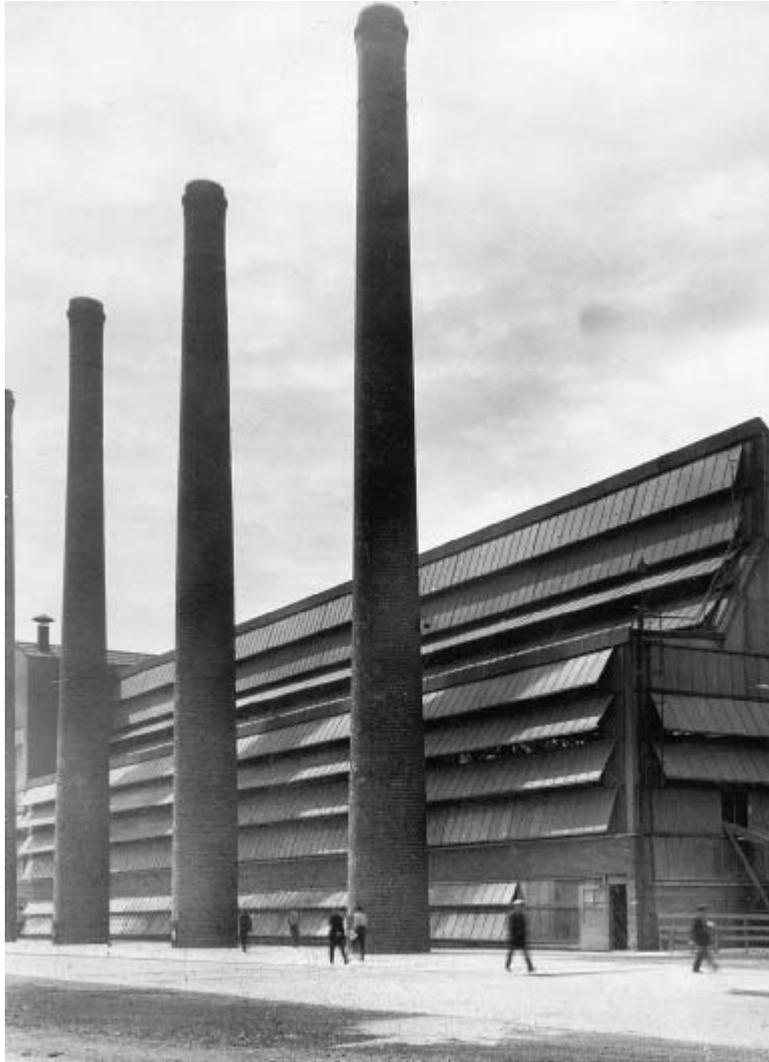
1.1
Albert Kahn, Ford Motor Company,
glass plant, Detroit, 1922.

1.2
Albert Kahn, Ford Motor Company,
air station, Detroit, 1922.

1.3
Albert Kahn, Ford Motor Company,
engineering laboratory, Detroit, 1922.

several tasks of accommodating and representing the full range of architectural concerns, those that were fundamental to inherited culture. The inadequacy of the new materials and methods could be seen when a building by a modern architect was compared with one by someone practicing within the classical tradition. His rejection of buildings by Le Corbusier, Lurçat, and Mallet-Stevens in France, or those by Mendelsohn, Poelzig, and Gropius in Germany, was complemented by his praise of the works of architects trained in the Beaux-Arts manner, such as Charles McKim, after whose designs Kahn's own Clements Library (his favorite building) may well have been modeled.

Yet while *style* may not be the best category to use when making a distinction between Kahn's industrial and nonindustrial buildings, *history* may be. In his rejection of modern solutions for institutional projects, Kahn denounced the "radical abandonment of all that has served hitherto," meaning the accumulated wisdom and motifs of the great architecture of the past. Likewise, in praising McKim, he celebrated his "re-use of well-tried forms."[1] This was not meant to discredit industrial solutions, nor the modern methods and materials used in their construction; it was meant simply to distinguish modern modes and elements of production from the tasks and motifs that could properly be called architectural. Some types answer current and pressing needs, others acknowledge conditions that have been and will be significant in perpetuity. Because examples of the first kind are of the moment, and moments change, they must be flexible, adaptable, and extendable, as were Kahn's factories. The second kind results from the combination and composition of elements that have been used for long periods of time, and therefore should look familiar and appropriate, as did his institutional buildings. The distinction between industrial and nonindustrial building is essentially one that finds in contemporary technology solutions to contemporary problems, while finding in historical forms motifs that can be used for suitable solutions: the first is a matter of building production, "business," the second of architectural representation, "art."

The question, therefore, concerns the alternatives to this division between production and representation, which in some ways is also an extension of that between modernity and tradition. How can design utilize the opportunities of current industrial production so that the practice of architectural representation is neither independent of nor subjugated to the domination of technology?

This question, while of general concern to architecture, is most apparent and unavoidable in the design of the external surface of buildings. Traditionally,

this was the problem of designing a facade. Yet, since the early part of the twentieth century, with the advent of the "free facade" and new technologies of construction, the nature and definition of the building's appearance became the subject of repeated consideration. As a result, the task of designing a "facade" has itself become questionable. Is this a loss? Or are there other ways of thinking and working with the topic that avoid dichotomy or the subjugation of one concern to the other? It may be that the unease with the facade also results from a suspicion about the project of representation itself. The task of disclosure in architecture is not limited to that of representation in the traditional sense of the word. An alternative strategy could involve seeing the building's external cladding as elements that structure both the building's skin and its temporal operations—an approach that would initially be seen as against representation.

One way of developing this question would be to pursue the reciprocity between the intentions behind an architectural project and the imperatives of construction, and in particular the role of technique. In contemporary architecture, process and methods of construction play an increasingly important role in the development and realization of many projects. It seems, therefore, that the historical position of mass production as one of the dominant factors of architectural "progress" requires rethinking. The fact that optimization through mass production did not result in the architectural benefits promised by its advocates suggests that the relationship between architecture and technology merits thought.

One of the strongest manifestations of an architecture of progress in the interwar and postwar period was the International Style. Already in its heyday this style received harsh criticism for its neglect of what was specific to locations or regions, a criticism that has led in recent years to proposals for a regionalist architecture. Some critics have demonstrated the inherently conservative character of the regionalist approach. Alan Colquhoun has shown a basic premise that all societies contain a "core, or essence, that must be discovered and preserved. One aspect of this essence lies in local geography, climate, and customs, involving the use and transformation of local, 'natural' materials."[2] He argues that this position can lead to the reinforcement of things as they are or have been rather than as they may become. This form of repetition accents history in the same way that style concerns promote well-tried or familiar motifs. Advocates of regionalism have, however, proposed it as a strategy and politics of resistance.[3] Clearly, engagement with particularities is one way the domination of technology can be

interrupted. The motives for these strategies may include the desire to affirm cultural conditions that are both inherited and contemporary; yet the conflict persists.

Built works and projects can be used to clarify these questions, as can writings, particularly those from the late nineteenth century to the present. The concern with the difficulties and opportunities of the external surface of buildings begins with the theoretical and practical isolation of that surface as the subject matter of architectural design. The autonomy of the surface, the "free facade," presumes a distinction between the structural and nonstructural elements of the building, between the frame and the cladding. This distinction is vividly present in the architecture of turn-of-the-century Chicago.

The discovery of the free facade was accompanied by unprecedented transformations in its tectonic and material qualities. Before the widespread use of frame construction, requirements for light, ventilation, and views outside the building were met with apertures, built as openings in a wall. The limits of these openings affirmed the wall's tectonic and theoretical primacy. The frame changed all of that: windows ceased being openings in walls and became walls themselves. But when this occurred, the wall's non-load-bearing functions had to be reconsidered. This redefinition of the tasks of enclosure at times achieved opposite ends. The use of transparent glass, for example, accomplished tasks previously associated with opacity. Not only considerations of light, ventilation, and view come into this, but also problems of appearance and construction. In fact, the use of standardized elements of construction highlights not only the difficulty of placing windows in walls but the more general issue of architectural surfaces.

Once the skin of the building became independent of its structure, it could just as well hang like a curtain or clothing. The relationship between structure and skin has preoccupied much architectural production since this period and remains contested today. The site of this contest is the architectural surface.