

# ADVANCED READING

## PASSAGE 1

Modern architecture has been criticized for emphasizing practical and technical issues at the expense of aesthetic concerns. The high-rise buildings constructed throughout the industrialized world in the 1960s and 1970s provide ample evidence that cost-efficiency and utility have become the overriding concerns of the modern architect. However, Otto Wagner's seminal text on modern architecture, first published in Germany in 1896, indicates that the failure of modern architecture cannot be blamed on the ideals of its founders.

Wagner's *Modern Architecture* called for a new style based on modern technologies and models of construction. He insisted that there could be no return to traditional, preindustrial models; only by accepting wholeheartedly the political and technological revolutions of the nineteenth century could the architect establish the forms appropriate to a modern, urban society. "All modern creation," Wagner wrote, "must correspond to the new materials and demands of the present...must illustrate our own better, democratic, self-confident, ideal nature," and must incorporate the new "colossal technical and scientific achievements" of the age. This would indeed seem to be the basis of a purely materialist definition of architecture, a prototype for the simplistic form-follows-function dogma that opponents have identified as the intellectual basis of modern architecture.

But the picture was more complex, for Wagner was always careful to distinguish between art and engineering. Ultimately, he envisaged the architect developing the skills of the engineer without losing the powers of aesthetic judgment that Wagner felt were unique to the artist. "Since the engineer is seldom a born artist and the architect must learn as a rule to be an engineer, architects will in time succeed in extending their influence into the realm occupied by the engineers, so that legitimate aesthetic demands can be met in a satisfactory way." In this symbiotic relationship essential to Modernism, art was to exercise the controlling influence.

No other prospect was imaginable for Wagner, who was firmly rooted as a designer and, indeed, as a teacher in the Classical tradition. The apparent inconsistency of a confessed Classicist advising against the mechanical imitation of historical models and arguing for new forms appropriate to the modern age created exactly the tension that made Wagner's writings and buildings so interesting. While he justified, for example, the choice of a circular ground plan for churches in terms of optimal sight-lines and the technology of the gasometer, the true inspiration was derived from the centralized churches of the Italian Renaissance. He acknowledged as a rationalist that there was no way back to the social and technological conditions that had produced the work of Michelangelo or Fischer von Erlach, but he recognized his emotional attachment to the great works of the Italian Renaissance and Austrian Baroque.

## PASSAGE 2

In order to explain the socioeconomic achievement, in the face of disadvantages due to racial discrimination, of Chinese and Japanese immigration to the United States and their descendants, sociologists have typically applied either culturally based or structurally based theories—but never both together. To use an economic metaphor, culturally based explanations assert the importance of the supply side of the labor market, emphasizing the qualities immigrant groups bring with them for competition in the United States labor market. Such explanations reflect a human-capital perspective in which status attainment is seen as a result of individuals' ability to generate resources. Structurally based explanations, on the other hand, examine the market condition of the immigrants' host society, particularly its discriminatory practices and their impact on the status attainment process of immigrant groups. In the economic metaphor, structural explanations assert the importance of the demand side of the labor market.

In order to understand the socioeconomic mobility of Chinese and Japanese immigrants and their descendants, only an analysis of supply-side and demand-side factors together, in the context of historical events, will suffice. On the cultural or supply side, differences in immigration pattern and family formation resulted in different rates of socioeconomic achievement for Chinese and Japanese immigrants. For various reasons, Chinese immigrants remained sojourners and did not (except for urban merchants) establish families. They were also hampered by ethnic conflict in the labor market. Japanese immigrants, on the other hand, were less constrained, made the transition from sojourner to settler within the first two decades of immigration, and left low-wage labor to establish small businesses based on a household mode of production. Chinese sojourners without families were more vulnerable to demoralization, whereas Japanese immigrants faced societal hostility with the emotional resources provided by a stable family life. Once Chinese immigrants began to establish nuclear families and produce a second generation, instituting household production similar to that established by Japanese immigrants, their socioeconomic attainment soon paralleled that of Japanese immigrants and their descendants.

On the structural or demand side, changes in institutional constraints, immigration laws, labor markets, and societal hostility were rooted in the dynamics of capitalist economic development. Early capitalist development generated a demand for low-wage labor that could not be fulfilled. Early Chinese and Japanese emigration was a response to this demand. In an advanced capitalist economy, the demand for immigrant labor is more differentiated: skilled professional and technical labor fills empty positions in the primary labor market and, with the traditional unskilled low-wage labor, creates two immigrant streams. The high levels of education attained by the descendants of Chinese and Japanese immigrants and their concentration in strategic states such as California paved the way for the movement of the second generation into the expanding primary labor market in the advanced capitalist economy that existed after the Second World War.

### PASSAGE 3

Although the legal systems of England and the United States are superficially similar, they differ profoundly in their approaches to and uses of legal reasons: substantive reasons in the United States, whereas in England the reverse is true. This distinction reflects a difference in the visions of law that prevail in the two countries. In England the law has traditionally been viewed as a system of rules; the United States favors a vision of law as an outward expression of the community's sense of right and justice.

Substantive reasons, as applied to law, are based on moral, economic, political, and other considerations. These reasons are found both "in the law" and "outside the law," so to speak. Substantive reasons inform the content of a large part of the law: constitutions, statutes, contracts, verdicts, and the like. Consider, for example, a statute providing (to make a proviso or stipulation) that "no vehicles shall be taken into public parks". Suppose that no specific rationales or purposes were explicitly written into this statute, but that it was clear (from its legislative history) that the substantive purpose of the statute was to ensure quiet and safety in the park. Now suppose that a veterans' group mounts a World War II jeep (in running order but without a battery) as a war memorial on a concrete slab in the park, and charges are brought against its members. Most judges in the United States would find the defendants not guilty because what they did had no adverse effect on park quiet and safety.

Formal reasons are different in that they frequently prevent substantive reasons from coming into play, even when substantive reasons are explicitly incorporated into the law at hand. For example, when a document fails to comply with stipulated requirements, the court may render the document legally ineffective. A will requiring written witness may be declared null and void and therefore, unenforceable for the formal reason that the requirement was not observed. Once the legal rule—that a will is invalid for lack of proper witnessing—has been clearly established, and the legality of the rule is not in question, application of that rule precludes from consideration substantive arguments in favor of the will's validity or enforcement.

Legal scholars in England and the United States have long bemused themselves with extreme examples of formal and substantive reasoning. On the one hand, formal reasoning in England has led to wooden interpretations of statutes and an unwillingness to develop the common law through judicial activism. On the other hand, freewheeling substantive reasoning in the United States has resulted in statutory interpretations so liberal that the texts of some statutes have been ignored altogether.

#### PASSAGE 4

How does the brain know when carbohydrates have been or should be consumed? The answer to this question is not known, but one element in the explanation seems to be the neurotransmitter serotonin, one of a class of chemical mediators that may be released from a presynaptic neuron and that cause the transmission of a nerve impulse across a synapse to an adjacent postsynaptic neuron. In general, it has been found that drugs that selectively facilitate serotonin-mediated neurotransmission tend to cause weight loss, whereas drugs that block serotonin-mediated transmission often have the opposite effect: they often induce carbohydrate craving and consequent weight gain.

Serotonin is a derivative of tryptophan, an amino acid that is normally present at low levels in the bloodstream. The rate of conversion is affected by the proportion of carbohydrates in an individual's diet: carbohydrates stimulate the secretion of insulin, which facilitates the uptake of most amino acids into peripheral tissues, such as muscles. Blood tryptophan levels, however, are unaffected by insulin, so the proportion of tryptophan in the blood relative to the other amino acids increases when carbohydrates are consumed. Since tryptophan competes with other amino acids for transport across the blood-brain barrier into the brain, insulin secretion indirectly speeds tryptophan's entry into the central nervous system where, in a special cluster of neurons, it is converted into serotonin.

The level of serotonin in the brain in turn affects the amount of carbohydrate an individual chooses to eat. Rats that are allowed to choose among synthetic foods containing different proportions of carbohydrate and protein will normally alternate between foods containing mostly protein and those containing mostly carbohydrate. However, if rats are given drugs that enhance the effect of serotonin, the rats' carbohydrate intake is reduced. On the other hand, when rats are given drugs that interrupt serotonin-mediated neurotransmission, their brains fail to respond when carbohydrates are eaten, so the desire for them persists.

In human beings a serotoninlike drug, d-fenfluramine (which release serotonin into brain synapses and then prolong its action by blocking its reabsorption into the presynaptic neuron), selectively suppresses carbohydrate snacking (and its associated weight gain) in people who crave carbohydrates. In contrast, drugs that block serotonin-mediated transmission or that interact with neurotransmitters other than serotonin have the opposite effect: they often induce carbohydrate craving and subsequent weight gain. People who crave carbohydrates report feeling refreshed and invigorated after eating a carbohydrate-rich meal (which would be expected to increase brain serotonin levels), in contrast, those who do not crave carbohydrates become sleepy following a high-carbohydrate meal. These findings suggest that serotonin has other effects that may be useful indicators of serotonin levels in human beings.