Urbanism: Engineering Trends in Ethiopia

PERRY A. FELLOWS

New York, U.S.A.

Orientation

EMPEROR Haile Selassie has earned great credit for the unusual growth of urbanization in Ethiopia. But a brief engineering account of the genesis and trends of urbanism in that country should include some token recognition of the parts played by people and events of earlier ages. The statement of the present situation should include a comment on conditions that may lead to problems to be solved in the future, even though there is no estimate of the effort required to provide that solution. It may not be possible to offer a solution with any degree of assurance.¹

What man wants in his environment and what nature provides are always at variance. The engineer’s work is to find where he can make some of the desirable adjustments, or to assist in making them if they are practicable. For example, he can manufacture automobiles and he can design and build bridges to carry automobile traffic across rivers. The engineering in these cases is direct and obvious. There are many other activities in which engineering is involved and in many just as important but not so apparent to the casual observer. The relationship of engineering to urbanization and to the growth of urbanism can sometimes be easily traced and credited, but usually that is not done. A very brief review of the development of urbanism in Ethiopia discloses many factors contributing to that development, some of which are engineering, though evaluating them may be impracticable.

An engineering knowledge of environment is of great importance. The natural resources of minerals, hydrocarbons, and water are of importance to the city, so too are the facilities of transportation.

Millions of years ago a mile-high, bubble-like lift of the earth’s crust took

¹ Urbanization in this review is a process of change in the character of a community. It is a gradual net gain of amenities as well as population. Urbanism is the resulting organic quality, or character, of such communities. Engineering comprises the technological disciplines by which the processes of urbanization are planned and carried out.
place in the area now occupied by Ethiopia. The subsequent subsiding of the center strip left mountainous plateaus separated by the Rift Valley, the Danakil floor of which is rugged, hot, and inhospitable. The plateaus are cut into many isolated blocks by deep canyons through which torrents now rush to the lower levels of the Rift Valley and the Nile. This area became the kind of country primitive man would have found best suited to his needs for food and defense. No doubt, there were here such men as there were in Tanganyika 1,750,000 years ago. Doubtless they found the roughness of the terrain to their advantage. At a later date arrivals from the Arabian peninsula included some from places where high levels of civilization had been attained, such as the Hadhramaut where cliff type dwellings had been built up to skyscraper proportions.

In Ethiopia there are many old monuments, including a stele at Axum, 70 feet high, still erect. Quarrying, carting, carving, and erecting such a single stone would be a major engineering feat even today. There is a whole mountain side at Gobena (Gobederah) carved in the likeness of a lioness. In other parts of the country there are large groups of stone phalli, tree-high, but otherwise realistic. These monuments are all the work of skilled technicians who must have been well organized, equipped with specialized tools, and provided with the equivalent of modern engineering supervision. With the required laborers and associated personnel, they must have constituted altogether communities of considerable size and importance.

The fertile Ethiopians highlands lie behind natural barricades, far south of the main overland highways of east-west mass movements; migrations, crusades, armies, and trading caravans. But they were close enough to the Arabian peninsula to permit continuing infiltration and penetration by restless, small tribal groups of Semitic people.

This site was an ideal setting for feudal states, and these Semitic tribes were practiced in that relationship. This accounts for their continuing existence as a coherent form of organization long after feudalism had passed from the European scene. As long as these little, warring groups could keep the rest of the world outside their area they did. During that time they could, and did, carry on their feuds between kings to establish authority and to determine who should be king of kings.

The Solomon Dynasty

Sheba was queen of Ethiopia in the tenth century before Christ. Sheba’s son visited Solomon, his father, in Jerusalem and was educated there. He also learned about the building of cities and many other aspects of urbanism. On his return to Ethiopia he not only carried information he had acquired, but

---