
Die im Wb aufgeführten Wörter mfrt und shnkt dürften kaum das S. bezeichnet haben; die kopt. Bezeichnungen COAM, COAQ, COPJQ, COAB, ABAHCOAM haben anscheinend keine äg. Etymologie.


W. H.
multifunctional towns), and macro (in terms of spatial and hierarchical configuration or interaction of settlements). 9

A. Micro-Scale. The basic rectangular house plan of historical Egypt first appears midway in the Predynastic Naqada-II sequence, 10 paralleled by development of increasingly elaborate, rectangulat-

ar forms, 11 and exemplified by a contemporary mud model (*Hausmodell). 12 During the early Dynasties quadrilateral forms become characteristic of elite residences, tombs, shrines, glyphs and seals (*Architekturdarstellung), 13 although the earlier, round or oval forms probably persisted in rural areas, judging by round squatter dwellings erected among the ruins of *Hierakonpolis during the late OK. 14 Dyn. 3 houses at Hierakonpolis form interlocking rectangular walls, enclosing compartmentalized living units and courtyards with ovens and storage buildings, 15 conforming in principle to Riecke's early Dynastic model compound. 16 These large complexes, ranging from 190 to over 350 m² in size, 17 contrast with smaller, one-room houses with attached yards and that measure only 27–57 m², found in the northeast sector of Hierakonpolis. 18 During the OK and MK more standardized, geometric arrangements for upper-class domestic architecture develop that make increasing use of columns, double storeys, porticos, and courtyards (*Haus, *Hausbau, *Haus-Darstellung), 19 to approximate Riecke's model NK house. 20 Nonetheless, the sinuous, irregular layout of the late NK settlement inside *Medinet Habu 21 cautions that the Amarna proto-

type was limited to 'planned' row-housing and elite residences, or to desert-margin sites with un-

restricted spaces, while less regular forms remained prominent in the crowded, floodplain villages. Such a dichotomy persists to the present day.

In terms of house size, Kemp 22 used the measurements from Kahun (el-*Lahun), *Deir el-Medineh, and *Tell el-Amarna (North Suburb) to show that 92–98% of the house dimensions exhibit approximately lognormal distribution, i.e., except for the largest mansions there was no sharp break due to social status or wealth. This finds support at Kahun, where a dozen or so houses in the walled-

off, laborer and craftsmen sector (west) are larger than any of those in the central sector, directly linked to the elite mansions. 23 Nonetheless, most of the houses in the homogeneous craftsmen's settlement of Deir el-Medineh have courtyards and overall dimensions of 40–90 m², 24 comparing closely with the inferred craftsmen's row-houses at Amarna (40–110 m², most with small courtyards), and contrasting with the laborers' row-

houses (East Village) at the latter site, with 40–50 m² size and lacking courtyards. 25 Workmen's houses had four rooms, the one next to the street serving mainly as an animal shelter, the central room used for eating and sleeping, and the two small rear ones for storage and food-preparation. The average house size for Kemp's sample 26 is 63 m², probably representing the basic space required by a nuclear family of 4 or 5 people. Houses larger than 200 m² (the one-sigma upper limit of Kemp's sample) probably housed extended families as well as domestic servants. 27

B. Meso-Scale. The archaeological evidence eluci-
dates the lay-out of Egyptian towns (*Stadtanlage). "Planned" settlements and at least some adminis-

trative centers had geometric street grids; some streets were regular, 28 while others were en-

croached upon by houses or enclosures and were correspondingly irregular. 29 Alleys between houserows appear to have been 2–4 m wide, intersecting streets 4–10 m wide, with the major thoroughfares at Tell el-Amarna exceeding 25 m, 30 although there is no reason to assume that such roadways were generally kept free of impediments or rubbish. Other, traditional towns and agricultural villages certainly had sinuous or maze-like roadways with numerous dead-ends. 31 Distinctive, 'neighborhood' clusters of houses evoked in Tell el-Amarna within only a few years, although such quarters were not socially homogeneous, and pockets of smaller houses were inserted among larger compounds, 32 as suggested by the tale of encroachment of less fortunate neighbors upon the mansion of Ra'ia. 33 Residential areas tended to crowd civic monuments or temple precincts, through organic growth 34 or by design. 35 Many towns were fortified by a wall or keep, especially during the early Dynasties and Late periods, 36 although there is little information about the degree to which fortified or defining walls (Stadtmauer) were maintained during times of political stability or how they may have re-

stricted town expansion.

Towns were generally situated on the higher and drier ground provided by natural river-bank levees (active or abandoned, of the *Nile and its *Delta Branches, or of the *Bahr Jussuf), the sand islands ("turtle-backs") of the Delta, or on the desert edge. 37 All larger towns were situated on navigable waterways, including now-abandoned channels of the Nile or Bahr Jussuf 38 and larger canals (*Kanal), because of the advantageous communications (*Hafen, *Schiffahrt). The case that the majority of Predynastic and almost all Dynastic settlements were located within the alluvium is not just a "theoretical" one: 39 (a) Twelve of the key Predynastic cemeteries of U.E. lack related habitation sites on the desert edge and must belong to settlements within the flood-
plain; they key Upper Egypt early Dynastic sites of Hierakopolis, *Elkab, and Thinis (el-Birba) are situated within the floodplain on alluvial soils, as are the traditional political and religious centers that formed the capitals of U.E. nomes 2, 4–7, 9–11, 13–15, and 20; c) In L.E., eleven early Dynastic towns, either traditional religious centers or archaeological sites, are documented within the central and eastern Delta, while there are three further early Dynastic cult centers within the western Delta.

The functions of the average Egyptian town are obscured by the lack of titles or formal occupations that might identify merchants or shopkeepers, by the minimal information provided by the titles of government officials or bureaucrats as to their actual responsibilities, and by little more than a rudimentary understanding of how towns were administered with respect to the countryside, the temples, or the central government. Thus the role of the town in regional market exchange (*Handel, *Markt) and in the national, vertical redistributive system remains largely inferential. During the OK, huv appears to designate royal economic and administrative centers of varying size, one of the roles of which appear to have been tax-collection (*Abgaben und Steuer). During the NK the key administrative centers had a royal appointee probably equivalent to mayor (*Bürgermeister). Nonetheless, in attempting to weigh the functional role of Egyptian towns, it is necessary to use proxy data such as the status of a nome (*Gaue) capital, the presence of elite or royal cemeteries, of a mayor, of one or more temples, of attached villas or suburbs, and of a fortress or quarry. Less problematical are specialized towns, such as the fortresses and trading-centers of Nubia and the western Delta periphery, or the priest and artisan settlements linked to major temples or mortuary cults. In view of the lacunae in regard to information about economic functions and urban institutions, the specific urban character of the larger Egyptian towns cannot be defined. The intimate linkage of administrative and population centers with traditional temples and key shrines already meets the criteria for one definition of “urban.” Yet the archaeological verification of a Dyn. 4–5 “industrial center” within Hierakopolis, devoted to flint-knapping, stone-vase cutting and copper smelting, but not linked to a mortuary cult, now suggests that craft quarters were common in other population centers. This cautions against applying the label of “sacred cities” to Egyptian towns. In any event, as in 19th-century Egypt, the majority of the population of even larger centers was probably employed in agriculture (*Landwirtschaft).

NK distinctions exist for “metropolis” (nut), “town” (dmjt), and “village” (wbd), but no criteria can be inferred so that a functional settlement hierarchy is better based on proxy data, such as those devised by Butzer to rank and distinguish “large village,” “small center,” “large center,” and “city” for U.E., the *Fajium, and L.E. nome 1. But functional hierarchies need not be equivalent to population classes, which can be better inferred from settlement size. The following dimensions have been obtained by planimetry of report plans or topographic maps, excluding temple complexes or walls, for the specified periods: Nubian fortresses 0.15–1.3 ha (MK/NK); *Elephantine 1.6 ha (OK), 3.5 ha (MK); Hierakopolis 5 ha (OK); *Elkab 9 ha (Early Dynasties); *Tell Edfu 8.5 ha (Ptolemaic); *Luxor over 280 ha (NK); *Abydos over 1 ha (OK/MK); *Hermopolis about 100 ha (NK); el-Manshah 27 ha (Ptolemaic); Amarna 380 ha (NK); Antinoopolis about 85 ha (Roman); *Hebenu 15 ha (Roman); Oxyrhynchus about 100 ha (Coptic); el-*Hibe 9.5 ha (Late); Kahun 12 ha (MK); *Medinet el-Fajium 70 ha (Roman); other Fajium koms up to 12 ha (Roman); *Memphis 31 ha (OK) and over 79 ha (NK); *Tell el-Jahudija 13.7 ha (NK); *Bubastis 64 ha (Late); *Athribis 48 ha (Roman); *Tell el-Dab’a 350 ha (NK), *Tell el-Faraun 25 ha (Hellenistic); *Thmu 68 99 ha (Late); *Menes 31 ha (Late); and *Tanis 105 ha (NK). Using a mean population density of 500 persons per hectare, this suggest that OK Memphis had some 15,000 inhabitants, the key OK provincial centers perhaps 500–2000 people each. For the NK, metropolis such as Thebes, Amarna and Tell el-Dab’a (Pi-Ramesse, *Ramessetadt) each probably had over 150,000 inhabitants at their zenith, with Memphis, Tanis and Hermopolis having in the order of 40 to 50,000 people, while the other provincial centers may have had 3000 to 7000 people. The total non-military population of the MK and NK Egyptian centers in Nubia can hardly have been more than a thousand or two. During the Late and Hellenistic periods, a dozen or so key Delta and Nile valley centers probably had populations in the order of 15,000–80,000, with second-eachelon provincial cities having no more than 6000 inhabitants. These rough estimates serve to confirm the prevailing impression that OK towns were quite small, and that the total population of places larger than 1000 was probably less than 50,000 people. Urban growth greatly accelerated during the NK and was characterized by a succession of striking "primate" cities, explicable by a strongly centralized administration. The population in places larger than 1000 probably exceeded
500,000, but even so urbanization was still less marked than in mid-19th century Egypt. During the Late period the number of medium-ranking cities expanded notably until, in Hellenistic times, the urban population probably exceeded a million (excluding Alexandria), suggesting patterns comparable to those of pre-industrial, 19th century Egypt.

C. Macro-Scale. The geographical distribution of settlements in Egypt was related to (a) the geomorphic and biotic mosaic in the Delta, the Fayum, and the valley; (b) the quality of site locations with respect to flood patterns and agricultural suitability; (c) access to navigable waterways and overland trade routes; (d) politically-favored centers of economic and political administration; and (e) the cumulative impact of prehistoric social aggregation, local historical trajectories, the changing role of cult centers, and the political and economic strategies of the central government.

Site networks in the valley were linear, with respect to the higher ground provided by the banks of the Nile and Bahr Jussuf, allowing for longer term shifts in river axis and meander geometry. In the Delta and Fayum, settlements preferentially followed several, radial water-courses, while everywhere the linear desert margins provided additional opportunities for villages and cemeteries. This longitudinal organization, essentially north-south and contrasted against the surrounding deserts (*Ostwüste, *Westwüste), was reinforced by (I) the corresponding arrangement of flood basins and the minor, diverging and converging basin channels upon which irrigation patterns (*Geographie, *Be- und Entwässerung, *Kanal, *Schaduf) were predicated; (II) the corresponding, often symmetrical disposition of soil qualities and agricultural organization from the levee crests, down the levee backslope and across the basin floors, to local backswamps, and ultimately the desert edge; (III) both accessibility and trafficability as a function of the same channel axes. External factors that influenced transverse contacts were mineral resources within the desert (*Bergbau), as well as trade routes (*Karawanken) determined by location of the Libyan oases (*Bahrija, *Farafra, *Charga), of the wadis providing access to the Red Sea (*Rotes Meer), and the coastal steppes west and east of the Delta where Egyptians interacted with rival peoples (*Libyen, *Asieten; *Kanal, Nil—Rotes Meer).

More subtle than this background schema were the cultural processes and still-enigmatic events that led to the early Dynastic emergence of specific administrative and cult centers (*Tempel), commonly linked to the equally problematical nomes (*Gauge). During the OK, NK and Late periods the *Delta (*Maroeis) was successively the focus of organized economic development, as was the Fayum (*Birket Qarun) during the MK and under the Ptolemies (*Kolonisation). Middle Egypt, especially in U.E. nomes 16—19, was agriculturally underdeveloped and thinly populated until Graeco-Roman times. During the OK and MK, Egypt had a single urban center, at Memphis; settlement hierarchies were poorly developed, with modest provincial centers in those U.E. nomes that merit historical attention during Dyn. 6—12, as well as a number of major and minor “temple towns.” During Dyn. 18 Thebes developed as a primate city, with additional large centers at Hermopolis and Memphis, and a temporary metropolis at Amarna, which briefly usurped some functions of both Thebes and Hermopolis. Under the Ramessids a new metropolis was created at Pi-Ramesse and later shifted to Tanis, while the population core of Egypt subsequently remained in the Delta. The agricultural productivity, the commercial contacts to Asia, and the strategic position evidently led to this shift. At the provincial level, two or more tiers of administrative centers, temple towns, and fortresses served to link the mass of simple agricultural villages to the seats of centralized, political power.

Kauffman has applied a sophisticated computer program from location theory to test the economic rationale of the U.E. settlement network. It shows the nome capitals were efficiently distributed at average river distances of 22 km, with several notable exceptions. The program (I) chose *Esna as the best administrative center for U.E. nome 3; (II) juxtaposed *Kom Ombo with Elephantine in U.E.1, and Abydos with el-Birba in U.E. 8; (III) preferred *Sako to *Hardai in U.E. 17; and (IV) generally minimized the administrative/economic role of U.E. capitals 12, 16—19, and 21—22, and specifically that of the east-bank towns in this sector. The program selected all but one of the towns with mayors (exception: *Sako) as the logical administrative centers of U.E., demonstrating the economic efficiency of the Ramessid settlement network in Egypt.

Siegelung, *htm(t)*, *sdl(t)* und *db(t)* braucht man wenig differenziert sowohl für „Siegel“ als auch für „Siegeln“ (= „S.“), *(Lehm-)Verschluß mit S.“ und „Versiegeltes“, d.h. „Etwas, das mit einem gesiegelten (Lehm-)Verschluß verschlossen ist“.