Cities, Civilizations and Oikumenes: I

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This paper is one in a series on issues in the comparative study of civilizations. Using a definition of "civilization" which treats civilizations as politico-social transaction networks of cities and their populations, earlier papers in the sequence (e.g. Wilkinson 1985, 1986, 1987a, 1987b, 1988, 1991) have derived a taxonomy of civilizations which has in turn been employed for comparative empirical data-gathering and theoretical development.

The current paper, using as its data source a set of lists of great global cities at various dates, is an attempt to allocate each city on the list to that constellation of cities, that "civilization," to which it most clearly politically appertains by reason of politico-military transactional linkage.

Taxonomy and Data

The civilizational taxonomy herein applied has been developed in several articles and papers: the best capsule summary is probably in Wilkinson (1987a). Replacing the idea of a civilization as either a homogeneous culture or a society possessing such a culture with the idea of a civilization as a society, a social-transaction network, usually culturally heterogeneous, and bonded not simply by cooperation (political or economic) but also by conflicts (hostility and war), a list of 14 multi-urban, politically-bonded polycultures was derived via a systematic critique of existing civilizations lists: see Table 1. Some members of this list were more or less standard entities (Egyptian, Mesopotamian, Aegean, Indic, Far Eastern, Japanese, Mexican and Peruvian civilizations); others were known but of disputed level of autonomy, or unprepossessing size (Irish, West African, Indonesian, Mississippian, Chibchan civilizations).

One however was new. It displaced from the standard lists of civilizations a collection of entities which now appear to be its
TABLE 1. A Roster of Fourteen Civilizations
(listed in their approximate order of incorporation into Central Civilization)

<table>
<thead>
<tr>
<th>Civilization</th>
<th>Duration</th>
<th>Terminus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mesopotamia</td>
<td>before 3000 B.C. - c. 1500 B.C.</td>
<td>Coupled with Egyptian to form Central</td>
</tr>
<tr>
<td>2. Egyptian</td>
<td>before 3100 B.C. - c. 1500 B.C.</td>
<td>Coupled with Mesopotamian to form Central</td>
</tr>
<tr>
<td>3. Aegian</td>
<td>c. 2700 B.C. - c. 560 B.C.</td>
<td>Engulfed by Central</td>
</tr>
<tr>
<td>4. Indic</td>
<td>c. 2300 B.C. - after c. A.D. 1000</td>
<td>Engulfed by Central</td>
</tr>
<tr>
<td>5. Irish</td>
<td>c. A.D. 450 - c. 1050</td>
<td>Engulfed by Central</td>
</tr>
<tr>
<td>6. Mexican</td>
<td>before 1100 B.C. - c. A.D. 1520</td>
<td>Engulfed by Central</td>
</tr>
<tr>
<td>7. Peruvian</td>
<td>before 200 B.C. - c. A.D. 1530</td>
<td>Engulfed by Central</td>
</tr>
<tr>
<td>9. Indonesian</td>
<td>before A.D. 700 - c. 1700</td>
<td>Engulfed by Central</td>
</tr>
<tr>
<td>10. West African</td>
<td>c. A.D. 950 - c. 1590</td>
<td>Engulfed by Central</td>
</tr>
<tr>
<td>11. Mississippian</td>
<td>c. A.D. 700 - c. 1700</td>
<td>Destroyed (Pestilence?)</td>
</tr>
<tr>
<td>12. Far Eastern</td>
<td>before 1500 B.C. - after c. A.D. 1850</td>
<td>Engulfed by Central</td>
</tr>
<tr>
<td>14. Central</td>
<td>c. 1500 B.C. - present</td>
<td>?</td>
</tr>
</tbody>
</table>

Interlinked regions, component cultures, and/or successive epochs—e.g. Classical, Medieval, Russian, Islamic, Western "civilizations." These do not qualify as transactionally separate, historically autonomous civilizations. Rather, there seems to have existed continuously, from about 1500 BC down to the present time, a single multi-urban, polycultural, political-military structure, process and network that began in the Middle East, expanded in all directions, and in due course overrode and entrained all other regional civilizational structures, networks and processes. This I have retrospectively labeled "Central civilization." Its taxonomic status is illustrated in Figures 1-2.

The purpose of this current paper is to examine an independently collected transhistorical set of data on sizes of world cities, and seek to allocate the urban data to the various civilizations shown in Table 1 and Figure 1. The data are those collected by Tertius Chandler in Four Thousand Years of Urban Growth (Chandler, 1987).

Chandler presents his data in a set of "Tables of World’s Largest
FIGURE 1.
THE INCORPORATION OF TWELVE CIVILIZATIONS INTO ONE "CENTRAL CIVILIZATION."

This figure illustrates the successive incorporation of autonomous civilizations into a larger, composite "Central civilization" (in grey).
FIGURE 2.

ALTERNATIONS BETWEEN STATES SYSTEMS AND UNIVERSAL EMPIRES

Each vertical bar in this chronogram represents a civilization: See Figure 1.
Central civilization is set off by a dashed line.

- WORLD-STATE PERIODS
- STATES-SYSTEM PERIODS
- POLITICAL STRUCTURE
  NOT YET CLASSIFIABLE
Cities: The Largest 75 cities, 2250 B.C.-1975. I have used all 15 of Chandler's tabulations 2250 BC-AD 622 (1987:460-466); the time-intervals between them vary from 122 years to 300 years. Of Chandler's later tables, I have used those at century intervals from AD 800 to AD 1900 (1987:467-492), omitting the half-century and occasional quarter-century tables from AD 1150 onward. In these lists, both the actual numbers of cities and their minimum sizes vary. There are 8 cities in the first table (2250 BC); the target of 75 is reached for AD 100, but not again or consistently until AD 1300 and after. The smallest city population begins around 30 thousand in 2250 BC, falls to 20 thousand in 1600 BC, rises to 30 thousand again by 600 BC, hovers at or near 40 thousand from AD 361-1300, then rises to 350 thousand in 1900. The largest city population also begins at around 30 thousand in 2250 BC, reaching 6,480,000 on the list for 1900.

Chandler's collection is enormous, the work prodigious. Still, data users always want more. I would endorse a project that set the minimum threshold at 10,000 population; placed no upper bound on the number of cities in the list, although the AD 1900 list would then be awesome (and a year 2000 list elephantine); and collected as far BC as possible at century intervals.

Since in other works I have taken a population of 10,000 as the criterion for "cityhood," all Chandler's cities are from my point of view the "large" ones. In this page I shall occasionally refer to them, accordingly, as "megalopoleis."

Despite the varying sizes, thresholds, intervals and maxima of the Chandler lists, they have in common that they collect "cities": concentrations or condensations of human populations; dense settlements; large numbers of people collecting persistently in small areas, areas too small to sustain their populations without considerable inflows of goods (and people, energy, materials and value) from their human hinterlands.

The selected lists have been sorted by civilization (as per Table 1) in Tables 2-28, which follow. I have also attempted to divide the cities lists into those within, and those outside, one particular oikumene, or trading area, which is of special historical and theoretical interest.

An "oikumene" is here defined as a trading area, a domain internally knit by a network of trade routes, in which there is enough internal trade so that the whole trading area evolves to a signifi-
cant degree as a system, while trade outside the area, though perhaps important both to the oikumene and to other oikumenes with which it trades, is not sufficiently dense and significant to cause system-level development to encompass these external systems. This definition is highly abstract, and contains terms themselves in need of definition: rather than elaborate definitions, however, I shall proceed to provide some concrete illustrations of oikumenical boundary-drawing, by allocating Chandler’s cities to such oikumenes as seem most plausible for each table.

2250 BC. (See Table 2 and Figure 3). The cities allotted to each civilization are listed in order of their appearance in Chandler’s corresponding table, in which the more populous appear first. I have used “Agade” as a city-name rather than “Akkad,” which it is convenient to use for the region. It will be noted that I have treat-

**TABLE 2. Cities and Their Civilizations: 2250 BC**

(8 cities, c. 30 thousand, listed by Chandler, 1987:460).

**OLD OIKUMENE:** 8 cities.

*Mesopotamian civilization.* Agade, Ebla, Nippur, Erech, Assur (5).

*Egyptian civilization.* Memphis, Heliopolis, Heracleopolis (3).

**OTHER OIKUMENES:** no cities.

![Figure 3. Cities Civilizations and the Old Oikumene in 2250 B.C.](source: Chandler, 1987:460)

Shaded Area = Within the Old Oikumene

● = Largest cities, threshold c. 30 thousand, 8 total in table, 7 on map (no location posted for Agade).

Data derived, on this and all following figures, from Chandler’s list (1987) via Wilkinson (1992–1993). Map shows only those civilizations which had cities on this list.

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ed civilization in Syria, as represented by Ebla, as an extension of "Mesopotamian" civilization.

The question of the volatility of the data upon which the tables are based should at this point be raised. The best approach seems to lie in comparing Chandler’s lists to other urban data collections with similar scope. Two are prominent: the previous edition of Chandler’s work (Chandler and Fox, 1974), done thirteen years earlier with a 3000-year rather than 4000-year span, and hence containing comparable data from Table 6 (1360 BC) onward; and the historical atlases of Colin McEvedy (McEvedy, 1961, 1967, 1972, 1982), some of whose maps contain cities whose symbols indicate estimates of their populations.

McEvedy’s map for the same year (Ancient, 2250 BC) shows as in the 10,000-15,000 size range, Coptos, Abydos, Heracleopolis, Memphis, Kish, Umma, Erech, Ur, Lagash, Susa; Mohenjo-Daro and Harappa. McEvedy’s omission of Agade, Ebla, Nippur, Assur and Heliopolis, given his lower threshold, creates a more striking discrepancy between his list and Chandler’s than does his inclusion of Coptos, Abydos, Kish, Umma, Ur, Lagash, Susa, Mohenjo-Daro and Harappa. The degree of disagreement between the sources is striking, and argues for caution in the interpretation of data derived from either.

Two other historical atlases, Harper’s (1987) and Barraclough’s (1984) occasionally show collections of cities. They are markedly less useful for comparison purposes than McEvedy for two reasons: they tend to map centuries rather than years; and their criteria for inclusion and exclusion are never expressly demographic, and rarely explicit. Still, some of their maps raise questions worth eventually addressing, e.g. of the relationship between “importance” and “size,” or between “trade” and “population.” Accordingly, I shall occasionally cite from these works for comparative purposes, without any sense that discrepancies between these works and Chandler’s are problematic in the same sense as are differences between Chandler and McEvedy (who are both using demographic criteria).

Harper’s undated map of Mesopotamia, (on an atlas page for 3500-2000 BC) shows as named “Sumerian and Akkadian sites” Ebla, Haleb (= Aleppo), Urbilum (= Arbil), Eshnunna, Der, Sippara, Kish, Hursag-Kalama, Nippur, Adab, Isin, Shuruppak, Uruk,
Larsa, Ur, Eridu, Cuthah, Umma, Lagash, Girsu, Susa (21 cities), with Agade on an inset map (1987:13). There is no size threshold specified; all cities on Chandler’s list appear except Assur, which may not qualify. The map of Egypt’s “Old Empire -2260 to -2180” (1987:15) shows Memphis, adds this, but omits Heliopolis and Heracleopolis.

McEvedy (Ancient, 2250 BC) shows a Mesopotamian trade network reaching from the Indus to the Lebanon, and an Egyptian network from Lebanon to Nubia. Because the timber of Lebanon was a resource for both, I have treated the networks as a single oikumene. As a result, in this table, and those that follow, I assign Egyptian and Mesopotamian civilizations to a single oikumene or trading area. This is as much as to say that they were significantly linked economically, more or less continuously, but not politico-militarily.

Indeed, all the cities in this list belong to, and their locus defines the core of, and their trade routes the linkages of, a single trading area, or oikumene. As the first to appear, it may be called the Old Oikumene. No competitor appears till Table 6, 1360 BC, and, as later tables will show, the Old Oikumene always remains largest in terms of the number of cities within it. The tables do not show, but it also appears to be the case, that the Old Oikumene always also remained largest in terms of urban population and of geographic area encompassed.

What polity had these cities? In Mesopotamia, states. In 2250 BC, Mesopotamian civilization was politically organized as the Sargonid, Akkadian universal empire, under the god-king Naram-sin, with Agade as its seat. If Chandler’s assessment of city sizes is correct, Uruk (= Erech) will doubtless have been the provincial or vassal metropolis of Sumer, Assur for Upper Mesopotamia, and Ebla for Syria; Nippur’s florescence will have been religious.

In Egypt, Pepi II of 6th Dynasty of the Egyptian Old Kingdom reigned in Lower Egyptian Memphis; Heliopolis flourished as the situs of the sun-god and his priesthood; Heracleopolis was the rising power center of Middle Egypt.

This table is the first to show, as may prove to be a general rule (though this paper will only suggest and not seek to assess or demonstrate the hypothesis) that large cities tend more to be political capitals or subcenters than to be trade centers.

Whether we prefer Chandler’s list or McEvedy’s map, Mesopot-
amian civilization possessed more megalopoleis than Egyptian in 2250 BC. Since I have come to accept as a loosely binding generalization a weakened “Malthusian” principle—that civilized (urban) human populations characteristically expand almost to the subsistence point (elites characteristically do not fulfill this prediction)—I take this to be evidence that Mesopotamian civilization was at this time “wealthier” than Egyptian, this despite the theoretical possibility that Pepi II, the lord of Memphis, was “wealthier” than Naramsin of Agade, and perhaps then the “wealthiest” individual in the Oikumene.

2000 BC. (Table 3 and Figure 4). All cities are still in the Old Oikumene; Mesopotamian cities still outnumber Egyptian cities.

In 2000 BC, Shulgi of the 3rd Dynasty of Ur is the god-king of the Mesopotamian universal empire whose metropole is Sumer. The vassal kings of subordinated city-states are provincial gover-
nors: Lagash subrules eastern Sumer, Susa subrules Elam in the east, Mari the upper Euphrates in the west, Assur the Upper Tigris in the north; Nippur remains the religious center. Ur is the cosmopolis.

Mentuhotpe II of Thebes, Upper Egypt, is ending the First Intermediate Period, conquering Heracleopolis, and founding the Middle Kingdom. Memphis is the metropolis for Lower Egypt, Heliopolis the religious center, Thebes the cosmopolis and world-capital.


1800 BC. (Table 4 and Figure 5). A new civilization, Indic, appears for the first time in this table. (McEvedy has its area citified

TABLE 4. Cities and Their Civilizations: 1800 BC

(10 cities, from c. 25 thousand to 20 thousand, listed by Chandler, 1987:460).

OLD OIKUMENE: 10 cities.  
Mesopotamian civilization. Isin, Mari, Susa (3).  
Egyptian civilization. Thebes, Memphis, Heliopolis, Kerma (Nubia), Heracleopolis, Asyut (6).  
Indic civilization. Mohenjo-Daro (1).
as of 2250 BC.) It is assigned to the Old Oikumene because of evidence for trade ties to Mesopotamia via the Persian Gulf.

On this list, Egypt has more megalopoleis than Mesopotamia. In 1800 BC, Mesopotamian civilization is a states system, with Isin, Mari, Susa, Larsa, Babylon, Assur and other cities variously independent, suzerain or vassal states. The Middle Kingdom of Egypt is at a peak under Ammenemes III; Mohenjo-Daro is the lower Indus center of Indic civilization.


1600 B.C. (Table 5 and Figure 6). In 1600 BC, the Babylonian universal empire has lost its grip on Mesopotamian civilization, whose leading cities are now the five regional primate cities, one to each of five regions: Akkad, Anatolia, Elam, Canaan and Syria. Egypt is also divided, during its Second Intermediate Period, Avaris being the Hyksos capital in the Delta, Nekhen prominent in Upper Egypt. Apparently the (Aryan?) sack has dropped Mohenjo-Daro from the list of megalopoleis. Though I believe that there are still Indic cities (urban populations of 10,000 or more), and would expect Indic civilization to reappear on this table if the population threshold were dropped accordingly, I suspect that most or all were inland, that trade with Mesopotamia was slight, and hence that a separate Indic oikumene will have formed.

**TABLE 5. Cities and Their Civilizations: 1600 BC**

<table>
<thead>
<tr>
<th>OIKUMENE</th>
<th>CITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>OLD OIKUMENE: 11 cities</td>
<td>Mesopotamian civilization. Babylon, Khattushash (Anatolia), Susa, Hazor (Canaan), Nineveh (5)</td>
</tr>
<tr>
<td>Egyptian civilization. Avaris, Memphis, Kerma, Nekhen (= Hierakonpolis) (4).</td>
<td></td>
</tr>
<tr>
<td>Aegean civilization. Knossos, Gortyn (Crete) (2).</td>
<td></td>
</tr>
<tr>
<td>OTHER OIKUMENES: no cities.</td>
<td>UNCLASSIFIABLE: 2 cities.</td>
</tr>
<tr>
<td>Unclassified. Setubal, Cordova (2).</td>
<td></td>
</tr>
</tbody>
</table>
Aegean civilization appears in this list for the first time. Its trade ties with Egypt lead me to place it in the Old Oikumene.

Mesopotamian civilization has resumed its position as apparently the wealthiest region of the Old Oikumene, though this is helped by my treatment of civilization in Syria (Hazor) and Anatolia (Khattushash) as an extension of “Mesopotamian” civilization. It would now be more accurate to treat Syria and Anatolia as joint semiperipheries of Mesopotamian and Egyptian civilizations, in which case Mesopotamia’s preeminence is reduced.

The inclusion on Chandler’s list of Setubal (Portugal) and Cordova presents a taxonomic puzzle, conservatively manageable by assuming them not to belong there. If they do, one of the Eastern Mediterranean civilizations had a longer westward reach than is usually thought, or an early Iberian civilization existed autonomously.

Harper’s map of the “Assyrian Empire 1800-1600 BC” names Ugarit, Kanesh, Carchemish, Haran, Nineveh, Dur Sharrukin, Kalhu, Ashur, Babylon and Susa.

1360 BC. (Table 6 and Figure 7). In 1360 BC, Tutankhamun rules New Kingdom Egypt. The capital, moved by Akhenaten to Amarna, is about to return to Thebes. Suppiluliumas rules the Hittite empire from Khattushash; Burnaburiash rules Babylonia from Dur-Kurigalzu; Assuruballit I rules Assyria; Ugarit is a great city of Canaan. The whole area from the Peloponnese to the Per-
TABLE 6. Cities and Their Civilizations: 1360 BC

(18 cities, 80 thousand to c. 24 thousand, listed by Chandler, 1987:460).

OLD OIKUMENE: 15 cities.
Central civilization. Thebes (Egypt), Khattushash, Dur-Kurigalzu (Kassite Babylonia), Memphis, Amarna (Egypt), Heliopolis, Nineveh, Susa, Erech, Ugarit, Hazor, Washshukani (Mitanni) (12).

Aegean civilization. Mycenae, Knossos, Argos (3).

OTHER OIKUMENES: 1 city.
Far Eastern civilization. Ao (1).

UNCLASSIFIABLE: 2 cities.
Unclassifiable. Cordova, Ctesiphon (2).

Figure 7. Cities Civilizations and the Old Oikumene in 1360 B.C.
Shaded Area = Within the Old Oikumene
* = Largest cities, threshold c. 24 thousand, 16 total.

sian Gulf, from Nubia to Armenia, is linked in a trade network (cf. McEvedy, Ancient, 1300 BC), and war and diplomacy further link the Middle East. From about 1500 BC I consider that Egyptian and Mesopotamian civilizations had developed a politico-military trans-actional-linkage network sufficiently dense, significant and continuing that they should be treated as a single civilization, “Central” civilization.

To treat this “Central civilization,” as a new entity (rather than a continuation of one of its component predecessors) is to imply that the merger of Egyptian with Mesopotamian civilizations took place on not too unequal terms. Omitting Syrian and Anatolian
cities (Khattushash, Ugarit, Hazor) as likely a joint Egyptian-Mesopotamian semiperiphery, there are in Table 6 four Egyptian cities (Thebes, Memphis, Amarna, Heliopolis), with a joint population estimated by Chandler at $(80 + 32 + 30 + 30) = 172$ thousand. There are five Mesopotamian cities (Dur-Kurigalzu, Nineveh, Susa, Erech, Washshukani) whose joint population would seem to be circa $(40 + 30 + 30 + 25 + 24) = 149$ thousand at maximum, or $(40 + 25 + 25 + 25 + 20) = 135$ thousand at minimum. This is not too unequal, though if either has the advantage it is Egypt. The balance will be far different when, later, the new Central civilization begins to fuse with other civilizations.

Central civilization will persist throughout the following series of tables, and its gradual expansion will eventually eliminate all other civilizations, through a process of engulfment. A parallel sentence will hold true of the Old Oikumene, which will persist, expand, and eventually eliminate all other oikumenes. Furthermore, Central civilization will follow the advance of the Old Oikumene, whose economic penumbra henceforward may be treated as a premonition of a future advance of the political-military Central system on the principle that "the flag(s) follow(s) trade." However, all other oikumenes will be engrossed within the Old Oikumene, and all other civilizations by Central civilization, only at about the date of the final table in this list, Table 28 (AD 1900). As the Old Oikumene will always have more cities than any competitor, so will Central civilization; but the balance in its favor will be less extreme. In this table, Central civilization contains 12 megalopoleis, its nearest rival 3; the Old Oikumene holds 15 cities, its nearest rival but one.

While I believe an Indic oikumene continues to have cities as of 1360 BC, it still lacks a megalopolis (i.e., Chandler's threshold is 24,000, mine still 10,000), hence cannot appear in this table.

Another oikumene does however appear in Table 6, associated with Far Eastern civilization. The implicit judgment is that as of 1360 BC there was not a significant, continuous trade linkage yet established between Ao (a Shang capital) and the easternmost megalopolitan outpost of Central civilization, in this case Susa. When a chain of cities, connecting Mesopotamia to the Yangtze develops, that may and will be taken as evidence of the development of substantial trade ties, hence an oikumenical connection, between Central and Far Eastern civilizations.
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Cordova remains problematic. Chandler (personal communication, January 12, 1991) follows a classic source in judging Ctesiphon to have been the Persian capital at about this time; but as its location should have made it a battleground for Assyrians and Kassites, I remain unconvinced of the synchronism.

Comparison data: McEvedy. McEvedy’s nearest map (Ancient, 1300 BC), using a threshold of 10,000-15,000, adds Heracleopolis, Aviris, Lachish, Damascus, Byblos, Aleppo, Carchemish, Assur, Babylon, Nippur, Larsa and Ur, and omits Dur-Kurigalzu, Amarna, Nineveh (which declined rapidly after 1360), Heliopolis, Erech, Washshukani, Mycenae, Knossos, Argos, Cordova and Ctesiphon. (Far Eastern civilization is outside his map’s perimeter.) Differences remain substantial.

Comparison data: Chandler and Fox. The table for 1360 BC is the first of Chandler’s tables to overlap his previous edition (Chandler and Fox, 1974:300). From that edition’s list of 20 cities, Babylon, Ecbatana, Jerusalem, Athens; Hsia; and Mohenjo-Daro (6 cities) have been omitted this time round, while Dur-Kurigalzu, Heliopolis, Ctesiphon, and Ugarit (4 cities) have been added. If we treat Babylon as having been refounded by Kurigalzu, an approximate measure of the degree of difference between the two lists would be, (5 omissions + 3 additions) / (18 currently listed + 20 previously listed) = 8/38 or 21.1%. Otherwise, the difference is (6 + 4) / 38 or 26.3%. Again the discrepancies suggest that we should proceed with caution; but the consistencies suggest that we should, with caution, proceed.


Barraclough (1984:67/1) sites nine “major Mycenaean palaces (c. 1500-1200 BC),” including Mycenae but with Tiryns and without Argos.

1200 B.C. (Table 7 and Figure 8). As of 1200 BC, the Middle Assyrian empire is in decline; Kassite Babylonia has recovered its independence. Egyptian Dynasty XIX has collapsed into an interregnum between two Sea People invasions. The Hittite Empire has collapsed under Sea People attacks, driving refugees into northern Syria where they set up city-states. Shang kings at An-Yang rule the Yellow River plain between the eastern and western mountains of Shantung and Shansi.
TABLE 7. Cities and Their Civilizations: 1200 BC

(16 cities, 50 thousand to c. 24 thousand, listed by Chandler, 1987:460).

OLD OIKUMENE: 12 cities.
Central civilization. Memphis, Khattushash, Dur-Kurigalzu, Thebes (Egypt), Nineveh, Susa, Erech, Duras, Heliopolis, Tanis (10).
Aegean civilization. Mycenae, Argos (2).

OTHER OIKUMENES: 3 cities.
Indic civilization. Ayodhya (1).
Far Eastern civilization. Anyang, Ao (2).

UNCLASSIFIABLE: 1 city.
Unclassified. Seville (1).

Figure 8. Cities Civilizations and the Old Oikumene in 1200 B.C.
Shaded Area = Within the Old Oikumene
* = Largest cities, threshold c. 24 thousand, 15 total.

Indic civilization reappears at last in this table. I have assumed that the fall of Mohenjo-Daro removed Indic civilization from the Old Oikumene. The new and solitary Indic megalopolis, inland, Gangetic Ayodhya (Oudh), is likely to have possessed its own oikumene rather than to have been relinked to the Old Oikumene; not until the port of Broach appears on Chandler’s list, i.e. not until 200 BC (Table 12), do I judge that the Indic Oikumene rejoins the Old Oikumene, though this may be too conservative.

There being no sign of megalopolitan extension of the Old Oikumene toward the Far Eastern, or vice versus, on this list, it seems best to treat them as still separate. Not until 1000 BC (Table 8) do such extensions begin to appear on the Far Eastern side.
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(Kweiteh), and not until 200 BC (Table 12) on the Central side (Rayy, Balkh).

Dur as is on the Euphrates. Seville presents the same problem as did Cordova in the 1600 BC table.

Comparison data: There have been dropped from the 20-city Chandler-Fox list (1974:300) Babylon, Loyang, Hastinapura and Tamralipti; Athens and Troy (6 cities), and added to it Dur-Kurigalzu and Heliopolis (2 cities). Again assuming Babylon and Dur-Kurigalzu to be one, the degree of difference is \( \frac{5 + 1}{16 + 20} = \frac{6}{36} = 16.6\% \); otherwise it is \( \frac{8}{36} = 22.2\% \).

1000 BC. (Table 8 and Figure 9). 1000 BC is a time of invasions in Mesopotamia, of Dynasty XXI in Egypt, with capitals in Thebes

TABLE 8. Cities and Their Civilizations: 1000 BC

(14 cities, c. 50 thousand to c. 25 thousand, listed by Chandler, 1987:460).

OLD OIKUMENE: 9 cities.
Central civilization. Thebes (Egypt), Babylon, Jerusalem, Memphis, Susa, Saba (Yemen), Nineveh, Heliopolis, Erech (9).

OTHER OIKUMENES: 5 cities.
Indic civilization. Hastinapura (1).
Far Eastern civilization. Changan (= Sian), Loyang, Pyongyang (Korea), Kweiteh (= Ho-yin, Tsinghai) (4).

Figure 9. Cities Civilizations and the Old Oikumene in 1000 B.C.
Shaded Area = Within the Old Oikumene
* = Largest cities, threshold c. 25 thousand, 14 total.
and Tanis. Israel and Tyre are significant powers. The Western Chou are displacing the Shang in the North China plain. I have preferred the term "Far Eastern civilization" to the more prevalent "Chinese civilization" because of my conviction that the latter disguises unduly the ethnic mosaic of urban continental East Asia. (Judging islandic East Asian civilization after its autonomy to have been far less ethnically diverse, I do not hesitate to label it "Japanese.") This table, which includes the cities of Pyongyang (Korea) and Kweiteh (Tsinghai), indicates the early date of diversification.


800 BC. (Table 9 and Figure 10). Central civilization’s notable

TABLE 9. Cities and Their Civilizations: 800 BC

(17 cities, c. 50 thousand to c. 25 thousand, listed by Chandler, 1987:460).
OLD OIKUMENE: 11 cities.
Central civilization. Thebes (Egypt), Calah (= Nimrud), Babylon, Memphis, Nineveh, Jerusalem, Saba, Samaria, Susa, Heliopolis, Van (11).
OTHER OIKUMENES: 6 cities.
Indic civilization. Hastinapura (1).

Figure 10. Cities Civilizations and the Old Oikumene in 800 B.C.
Shaded Area = Within the Old Oikumene
* = Largest cities, threshold c. 25 thousand, 75 total.
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states include Assyria (under Adadnirari III), Babylon, Israel (under Joahaz), Judah (under Jehoash), Egypt (under Shoshenq III of Dynasty XXII, Bubastis), Aram (Ben Hadad II), Tyre (Pu’myat or Pygmalion), Urartu (Ispuini). The Yellow River Valley remains under the Western Chou. Aegean civilization has disappeared from this and the preceding table; I believe, however, that, as with Indic, there remain Aegean cities (10,000+), though no megalopolis (for these tables, c. 25,000).

Comparison data: McEvedy's nearest map (Ancient, 825 BC), omits Jerusalem, Saba, Heliopolis and Van; adds (at about 30,000) Tyre, and (at about 10-15,000) Tanis, Gaza, Sidon, Damascus, Hama, Aleppo, Carchemish, Assur, Erech and Ur; and does not cover Far Eastern or Indic except for the Punjab (nor do any of its successor maps). Though McEvedy has a lower threshold of 10,000 vs. Chandler's of c. 25,000, the disagreement over Tyre at least is still noteworthy.

650 BC. (Table 10 and Figure 11). Assurbanapal rules Assyria, fighting the rebellious coalition of his brother Shamashshumukin, king in Babylon, in alliance with Egypt (Psammetichus I, Dynasty XXVI, at Sais), while controlling Judah (Manasseh) and Tyre (Ba'al). Ardys rules in Lydia, expanding against the Greek cities; the Rusids rule in Tammaritu in Elam. Under the tyrant Cypselus, Corinth has begun to rival Miletus, which has been sending out colonies for over a century. In the Yellow River Basin, the Eastern Chou "dynasty" presides over a loose confederacy of states.

Miletus is assigned to Aegean civilization in this table; the following table (430 BC) allots Athens, Ephesus, and all the Greek cities to Central civilization, on the judgment that Central engulfed Aegean civilization shortly after this date. Lintzu was the capital of Chi, a state (and people) at this time semi-barbarian, i.e. not yet culturally assimilated to, nor accepted as of, what we may call "Chinese" culture, thus it continues the demonstration of the ethnic mosaic of the Far Eastern civilization.

This list drops from the 20-city Chandler and Fox list (1974:300) Yenhsiaitsu, Chicheng, Hsueh and Anyang; and Camelot (5 cities). It adds Susa; Lintzu, Kingchow, Hsientien and Pyongyang (5 cities), for a difference of (5 + 5) / (20 + 20) = 25%.

Harper's map of "Greek colonization 750 BC to 450 BC" (1987:43) shows as "principal metropolises" 675 BC to 540 BC Phocaea, Samos, Miletus and Thera.
TABLE 10. Cities and Their Civilizations: 650 BC

(20 cities, 120 to 30 thousand, listed by Chandler, 1987:460).

OLD OIKUMEME: 12 cities.
- Central civilization. Nineveh, Memphis, Babylon, Sais, Marib (Yemen), Jerusalem, Napata (Nubia), Ecbatana, Calah, Van, Susa (11).
- Aegean civilization. Miletus (1).

OTHER OIKUMENES: 8 cities.
- Indic civilization. Kausambi, Ayodhya (2).
- Far Eastern civilization. Lintzu (Chi), Loyang, Kingchow, Hsintien, Changan, Pyongyang (6).

Harper’s map “The Eastern CHOU and hegemony states 722-481 BC” names Chi (= Peking), Linzi, Shaoge (= Anyang), Ying (Ch’u), Nanking, Gushu, Kuaiji, Yi (Jin), Yung (Qin) and Lanchou, and shows Loyang prominently.

430 BC. (Table 11 and Figure 12). Artaxerxes I rules the vast Persian Empire. Outside it, Athens and Sparta have begun the Peloponnesian War. Syracuse seeks hegemony in Sicily; Rome fights nearby Veii. In the Yellow River plain, power continues to diffuse to the increasingly warring states.

This table is the first to have a notable presence of cities which, though surely or most likely capitals of states, had such small states and/or hinterlands to extract from that they must have flourished.
TABLE 11. Cities and Their Civilizations: 430 BC


OLD OIKUMENE: 29 cities.


OTHER OIKUMENES: 22 cities.

Indic civilization. Patna, Benares, Anuradhapura (Ceylon), Sravasti, Vaisali, Kausambi, Champa (India), Dantapura, Rajagriha, Ayodhya, Trichinopoly (11).

Far Eastern civilization. Yenhsiatsu (Yen; north of Beijing), Loyang, Hsueh (Yueh), Soochow (Wu), Lintzu, Lucheng, Fenghsiang (Tsin), Changsha (Chu), Pyongyang, Taiyuan (Chao) (10).

Mexican Civilization. Cuicuilco (1).

Figure 12. Cities Civilizations and the Old Oikumene in 430 B.C.

Shaded Area = Within the Old Oikumene
* = Largest cities, threshold c. 30 thousand, 51 total.

(demographically) and lived largely by trade: most Greek and Phoenician cities are of this character.

Cuicuilco marks the first appearance of the New World on the megalopolitan list. It implies also a fourth Oikumene (after the Old, Indic and Far Eastern). Yenhsiatsu, Hsueh, Soochow, Fenghsiang, Changsha, and Taiyuan, like Lintzu in the preceding table, were capitals of non-Sinicized or partly Sinicized peoples, and provide further evidence of the continuing ethnic diversity of Far Eastern

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**Comparison data:** McEvedy’s nearest map (*Ancient*, 375 BC), shows Ecbatana, Susa, Persepolis, Sparta, Tarentum, Messene (Sicily), Sidon, Sardis, Rome, Tyre, Gela, and Damascus as over 10,000 but under 30,000; omits Jerusalem, Meroe, Marib, Ephesus, Agrigentum, Argos, Crotone, Cyrene, Corcyra, Kerch; and adds (at over 10,000) Utica, Capua, Naples, Thebes (Greece), Byzantium, Milletus, Rhodes, Sais, Tanis, Aleppo, Harran, Erech and Rayy. Differences remain significant.

Vs. Chandler and Fox’s list of 50 (1974:401), this table drops Megalopolis, Capua, Erech, Thebes (Greece); Surarnagiri, Ujjain; Chicheng and Changan (8 cities), and adds Crotone, Gela, Kerch, Elis, Trichinopoly; Fenghsiang, Pyongyang, Taiyuan; and Cuicuilco (9 cities), for a difference of \( \frac{8 + 9}{50 + 51} = \frac{17}{101} = 16.8\% \).

**Harper’s map** “Organization of the world’s first great empire” (1987:45) names, in addition to many sites mentioned by Chandler, Elephantine, Dascylium (Mysia), Nineveh, Bagistana (Media), Nippur, Rai (= Tehran), Shiraz (Persis), Pasargadae (Persis), Merv, Maracanda (= Samarkand), “Bactria,” Kabul. Its map “The Greek cities in the Classical Age, Vth century BC” (1987:47) shows Chalcis, Thebes and Miletus outranking e.g. Ephesus.

**Harper’s map** “The Warring States” (1987:31) shows Chi (Yen), Lin-tzu (Ch’i), Shang-ch’in (Sung), Han-tan (Chao), Dalianng (Wei), Cheng-chou (Han), Loyang (Chou), and Xianying (Qin). 200 BC. (Table 12 and Figure 13). Major states in Central civilization include Rome, fresh from victory over Hannibal of Carthage, and Seleucid Syria under Antiochus III the Great; also Macedon (Philip V), Egypt (Ptolemy V Epiphanes), Parthia (Arsaces II), Bactria, Pergamum, Rhodes. Northern India is dissolving under the late Mauryas, China uniting under the Former Han.

By this time I believe it is proper to reassign Indic civilization to the Old Oikumene, because of the rise of *Broach* (= Barygaza), an overseas trade entrepot for Central civilization, along with *Sopara* (a candidate for identification as “Ophir”).

*Balkh* indicates the far northeast frontier both of Central civilization and of the Old Oikumene; it and *Rayy*, on the road from Babylon and Ecbatana/Hamadan to Bactria, reflect extensions of
TABLE 6. Cities and Their Civilizations: 1360 BC
(55 cities, 400 thousand to 30 thousand, listed by Chandler, 1987:462).

OLD OIKUMENE: 44 cities.
Central civilization. Alexandria, Seleucia, Carthage, Rome, Antioch, Syracuse, Rayy (= Tehran), Athens, Balkh (= Bactra), Corinth, Memphis, Babylon, Ecbatana, Jerusalem, Marib, Rhodes, Ephesus, Cirta (= Constantine, Algeria), Meroe, Pergamum, Messina, Damascus, Amasia (Anatolia) Vienne (Gaul), Olbia, Cyrene, Sparta (27).
Indic civilization. Patna, Ujjain, Anuradhapura, Paithan (Andhras), Taxila, Benares, Aror (Sind), Tosali, Vaisali, Kolkai, Broach (Gujarat), Peshawar, Kolhapur, Sopara, Trichinopoly, Srinagar, Madurai (17).

OTHER OIKUMENES: 11 cities.
Far Eastern civilization. Changan, Pengcheng, Soochow, Loyang, Nanking, Lucheng, Changsha, Kaifeng (8).
Mexican civilization. Cuicuilco, Izapa, Tres Zapotes (3).

Figure 13. Cities Civilizations and the Old Oikumene in 200 B.C.
Shaded Area = Within the Old Oikumene
* = Largest cities, threshold c. 30 thousand, 55 total.

trade routes toward both the Far Eastern and the Indic oikumenes. However, the Indic oikumene has responded by generating the megalopolis of Taxila, implying significant overland connection, while no similar extension is apparent from the Far East. Hence the Far Eastern oikumene is here treated as persisting, the Indic as linked into the Old Oikumene. A convenient (rather than accurate) date for that linkage might be 326 BC (entry of Alexander into Taxila).
Pengcheng. Chandler (1987:573) locates “Pincheng” 70 miles NW of Kaifeng, and identifies it as Hsiang Yu’s capital 207-205 BC (1987:98). I would call the latter city “Peng” or “Pengcheng” (cf. Loewe 1986:114; Bielenstein, 1986:253; Demieville, 1986:821), and site it on the banks of the Ssu, in the northernmost part of the old Warring State of Ch’u which Hsiang Yu revived, and which the Han maintained as the capital of a kingdom called Ch’u.

Comparison data: McEvedy’s nearest map (Ancient, 145 BC) properly omits Carthage (destroyed 146 BC); omits Jerusalem, Marib, Meroe, and Taxila (and does not otherwise cover Indic civilization); shows as under 30,000 (but over 10,000), Athens, Balkh, Babylon, Ecbatana, Ephesus, Pergamum, Damascus, Cyrene; and adds, in that same category, over 20 other cities. Nonetheless the degree of direct disagreement is less than in prior maps.

As compared to the parallel list of 49 cities in Chandler and Fox (1974:302), there have been dropped Sardis, London, Capua; Kavery, Rajagriha, Ayodhya, Sravasti, Champa, Jullundur; Lintzu, Yenying, Yenhsiatsu, Hsueh, Pyongyang (14 cities), and added Athens, Cirta, Corinthis, Messina, Amasia, Vienne, Olbia, Cyrene, Sparta; Paithan, Aror, Kolkai, Peshawar, Sopara, Madurai; Pengcheng, Kaifeng; Cuicuilco, Izapa and Tres Zapotes (20 cities), for a difference of $(14 + 20) / (49 + 55) = 34/104 = 32.7\%$.

Harper’s map of “The Hellenic and Hellenistic world on the eve of the Roman conquest (185 BC)” (1987:51) shows as ranking with or above cities on Chandler’s list Pella (Macedonia), Sparta, Byzantium, Sinope, Karasi (Pontus), Trapezus (= Trebizond), Mazaka (Cappadocia), a second Seleucia (Cilicia), Edessa, Artaxata (Armenia), Susa, Persepolis, Hecatompylos (Parthia), Maracanda, Pura (Gedrosia).

Harper’s map of India 250 BC (1987:56) shows 15 cities, of which however only 3 (including Kasi = Benares) overlap this list.


AD 100. (Table 13 and 14). Rome is nearing its imperial peak under Trajan. Parthia has been quiet since Tiridates received his crown from Nero in AD 63. Kanishka or his Kushana dynasty rule
TABLE 6. Cities and Their Civilizations: 1360 BC

(75 cities, 450 thousand to 30 thousand, listed by Chandler, 1987:463).

OLD OIKUMENE: 55 cities.


Indic civilization. Anuradhapura, Peshawar, Paithan, Pata, Patna, Dohad (Kshatrapas), Kavery (Cholas), Broach, Madurai, Benares, Kolhapur, Aror, Srinagar, Ujjain, Jumna, Tosali, Jullundur, Ayodhya (18).

OTHER OIKUMENES: 20 cities.

Far Eastern civilization. Loyang, Soochow, Changan, Nanking, Chengdu, Wuchang, Huando (Koguryo, Korea), Kashiuara (Japan), Kanchow, Taiyuan, Peking, Pengcheng, Canton, Kingchow, Namhan (= Kwangju, Paekche, Korea), Kyongju (Silla, Korea), Hangchow, Changsha, Tunhuang (19).

Mexican civilization. Teotihuacan (1).

North India from Peshawar. The Later Han dynasty is weakening at the center, but has recently extended its power in Turkestan and opened an important silk trade with Rome.

Accordingly, it is possible—cf. McEvedy (Ancient, AD 230)—that Far Eastern civilization has now been linked into the Old Oiku-
mene via Rayy, Merv and Balkh. But I have delayed acknowledging that link until AD 622, when the growth of connector cities in Central Asia makes the case more persuasive.

Nevertheless, I must note that Harper's map "Han Empire from 202 BC to AD [220] (1987:55) differs notably from this reading, in showing the silk route as studded with cities from Ch'ang-an through Chang-yeh, Chin-ch'uan, Tun-huang, Chieh-mo, Ho-t'ien, Kashgar and Samarkand. The latter pair reach Chandler's list only by AD 622. Similarly, Barraclough (1984:70-71), ratifying the sizable Rome-China trade from c. 100 BC through c. AD 200, shows Merv and Loyang (which appear on Chandler's list) as linked by sites of equal rank: Maracanda (= Samarkand), Kokand, Kashgar, Yarkand, Khotan, Tun-huang, An-hsi and Lanchow.

Kashiwara (a site on the Osaka plain, SE of Osaka, SW of Nara, on a pass between them, and E of Sakai) is classified as "Far Eastern" rather than "Japanese" because I date the historical autonomy of Japanese civilization from Far Eastern half a millennium later than this table. Kyongju (= Saro) is the Korean name for the Silla state capital which appears in Chandler's list as "Keishu"; in this also I have followed Chandler and Fox (1974:303). I substitute, here and AD 361, "Hwando" for Chandler's "Tonggoo"; Hwando is the currently most popular name (alternatives are Chi-an, Jian, Kungnae) for the capital of the Koguryo state. Cf. Lautensach, 1945:21. Chandler (1987:453) sites Kanchow in Chekiang, but I believe that at this date it must be the Kan/Chiang-yeh/Thogara in the Kansu corridor.

Comparison data: McEvedy's nearest map (Ancient, AD 230) is too far away for much useful comparison, but shows as cities over 30,000 in the Central area Rome, Seleucia, Alexandria, Antioch, Carthage, Smyrna, Athens, Rayy, Ephesus, Istakhr, Pergamum; all others from Chandler are shown as over 10,000 but under 30,000 except Nisibis, Zafar, Seville, Oxyrhynchus, Angora, Gortyn and Babylon, which are entirely omitted, while many others of that size are shown; McEvedy also cites Palmyra and Hatra as over 30,000.

Vs. the 62-city list of Chandler and Fox (1974:303), this list has lost Sardis, Marib, Cordova, Damascus, Caesarea (Kaysari), Volubilis (near Fez, Morocco), Autun; Cranganore, Sravasti, Kanchi; Lintzu, Pyongyang, Yenhsiatsu, Tsinan (14 cities) and gained Athens, Nisibis, Zafar, Lyon, Nimes, Seville, Capua, Byzantium, Thes-
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salonica, Oxyrhynchus, Angora, Ostia, Petra, Gortyn; Dohad, Aror, Jumnar, Jullundur; Chengdu, Kanchow, Peking, Hwando Pencheng, Kingchow, Namhan, Keishu, Changsha, and Tunhuang (28 cities), for a difference of (14 + 27) / (62 + 75) = 41/137 = 29.9%.

Harper's map of India "around 150 AD" (1987:56) shows 13 cities of which 4 (including Kasi = Benares) overlap this list.

AD 361. (Table 14 and Figure 15). Rome, under Julian, is at war with Sassanid Persia under Shapur II. Samudragupta of the Gupta dynasty of Patna rules round the Ganges. China is divided between

TABLE 14. Cities and Their Civilizations: AD 361


OLD OIKUMENE: 38 cities.

Central civilization. Constantinople, Ctesiphon, Rome, Antioch, Alexandria, Edessa, Carthage, Trier, Rayy, Athens, Nisibis, Caesarea (= Kaysari, Anatolia), Nishapur, Jerusalem, Leptis, Stakhr, Axum, Marib (Yemen), Syracuse, Smyrna, Vienne, Dvin, Thessalonica, Damascus, Milan, Arles, Hippo, Regius (= Bone, Algeria) (27).


OTHER OIKUMENES: 12 cities.

Far Eastern civilization. Nanking, Ye (= Anyang; Huns), Changan, Prome (Burma), Soochow, Chengdu, Wuchang, Hwando, Indrapura (Cambodia), Kyongju (Korea), Liaotung (11).

Mexican civilization. Teotihuacan (1).

Figure 15. Cities Civilizations and the Old Oikumene in A.D. 361
Shaded Area = Within the Old Oikumene
• = Largest cities, threshold c. 40 thousand, 50 total.
Eastern Chin and the “sixteen kingdoms” of the many peoples of the north. Axum is in Northeast Africa, across the Red Sea from Yemen. Dvin is in the Caucasus. The later political history of Southeast Asia is so clearly part of the Far Eastern (vs. Indic) city network (civilization) that despite the colonial/proselyte dependence of Southeast Asia on Indian religious/commercial impetus I have classified it even this early as “Far Eastern”: so Prome and Indrapura.

Comparison data: McEvedy’s very comparable map (Ancient, AD 362) gives a substantially smaller size for Ctesiphon, Edessa, Rayy, Athens, Nisibis, Nishapur, Jerusalem, Syrcacuse, Smyrna, Vienne, Damascus; omits Caesarea, Leptis, Axum, Marib, Dvin, Arles, Hippo and Taxila; adds numerous other small cities, which fall under this table’s threshold, and the large city of Ecbatana (Hamadan), which may not. Again the discrepancy is worrisome but far from crippling.

As compared to Chandler and Fox’s 64-city list (1974:304) this table omits Memphis, Ephesus, Corinth, Pergamum, Capua, Aquileia, Seville, Cordova, Isfahan, Mecca, London; Broach, Madurai, Kolkai, Gundishapur, Kolhapur, Peshawar; Loyang, Pyongyang, Canton, Kanchow, Kinchow, Kalgan, Puyo and Namhan (25 cities), and adds Athens, Nisibis, Leptis, Vienne, Damascus, Hippo; Aror, Benares; Ye, Hwando, and Liaotung (11 cities), for a difference of $(25 + 11) / (64 + 50) = 36/114 = 31.6\%$.

Harper’s map of India “around 400” (1987:57) shows 14 cities, of which 3 overlap this list.

AD 500. (Table 15 and Figure 16). The major Central states are Eastern “Rome” under Anastasius I, Sassanid Persia (Zamas), Ostrogothic Italy (Theodoric the Great), the Frankish lands (Clovis), Visigothic Spain, Vandal Africa. In India the Gupta empire is dissolving. In the Far East the Toba Wei dominate North China from Loyang.

Zafar replaces Chandler’s “Takhar.” Chandler’s source (Budge, v.1:262) indeed cites “Takhar” as the Himyaritic capital conquered by Abyssinians AD 525. But more recent works refer to this Himyarite capital as “Zafar” (e.g. Mueller 1988:53); “Taqar” currently names the mountain on whose flanks the site of Zafar lies.

TABLE 15. Cities and Their Civilizations: AD 500

(47 cities, 400 thousand to 40 thousand, listed by Chandler, 1987:465).

OLD OIKUMENE: 29 cities.


Indic civilization. Sialkot (Ephthalites), Ayodhya, Gwalior, Mandasor (Malwa), Kanchi, Anuradhapura, Kavery, Benares, Srinagar (9).

OTHER OIKUMENES: 18 cities.

Far Eastern civilization. Loyang, Nanking, Changan, Prome, Soochow, Pyongyang, Chengdu, Wuchang, Pengcheng, Yangchow, Kyongju, Ungjin (= Konju Korea), Indrapura, Tatung (Toba Wei), Ye (15).

Mexican civilization. Teotihuacan, Tikal, Balakbal (3).

Comparison data: McEvedy’s nearest map (Ancient, AD 528) omits “small” cities (c. 10,000-15,000), and hence should ideally almost overlap this list (for Central civilization) with perhaps some more entries since McEvedy’s lower threshold is about 30,000. But it contains only 11 cities; adds Milan, Salonika and Hamadan; omits Edessa, Amida, Nisibis, Isfahan, Jerusalem, Caesarea, Nishapur, Damascus, Merv, and Coptos; and leaves outside its perimeter Zafar and Balkh.

AD 622. (Table 16 and Figure 17). China is uniting under the first Tang emperor, Tai Tsu. Japan is being Sinicized and Bud-
TABLE 16. Cities and Their Civilizations: AD 622

(51 cities, 500 thousand to 40 thousand, listed by Chandler, 1987:466).

OLD OIKUMENE: 49 cities.


Far Eastern civilization. Changan, Loyang, Prome, Chengdu, Isanapura (Cambodia), Wuchang, Pyongyang, Hangchow, Kyongju, Asuka (Japan), Nanking, Kashgar (Turkestan), Indrapura, Ye, Yangchow, Liaotung (16).

OTHER OIKUMENES: 2 cities.

Mexican civilization. Teotihuacan, Tajin (2).

Figure 17. Cities Civilizations and the Old Oikumene in A.D. 622

Shaded area = Within the Old Oikumene
* = Largest cities, threshold c. 40 thousand, 51 total.

dhized as a result of the work of embassies to China inspired by Prince Shotoku. Harsha is conquering North India; Pallavas and Chalukyas predominate to the south. The Byzantines under Heraclius are attacking the Persians under Chosroes II; neither side takes note of the Hegira.

Kashgar is the current indicator of the not-exclusively-Chinese character of Far Eastern civilization. Its presence, along with Samarkand, suggests that enough Eurasian trade exists to enroll the Far Eastern oikumene in the Old Oikumene. By now, Japanese
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Civilization has begun to gain autonomy; hence Asuka might have been assigned to a "Japanese" civilization, separate from Far Eastern. The case is clear by AD 800; in 622 the (prior) embassies to the Sui and (coming) embassies to the Tang raise too much doubt about Japan's sociohistorical autonomy.

Comparison data: As contrasted to the 71 cities in Chandler and Fox (1974:305), this list has lost Memphis, Antioch, Ecbatana, Mecca, Nishapur, Smyrna, Medina, Theodosiopolis, Axum; Ayodhya, Malakuta, Kolkai, Ujjain, Gwalior, Tamralipti, Tenasserim, Gauhati, Gundishapur, Kolhapur, Kalyan the elder; Soochow, Pagan (Burma), Dvaravati (= Ayutia, Siam), "Pingcheng," Canton, Changsha, Taiyuan, Lhasa (Tibet), Peking; and Osaka (30 cities). It has gained Damascus, Carthage, Dvin, Samarkand, Thessalonica; Bezwada, Aror; Kashgar, Liaotung; and Tajin (10 cities), for a difference of \((80 + 10) / (71 + 51) = 40/122 = 32.8\%\).

Harper's map of India "640: Harsa" (1987:57) shows 11 cities, of which 5 overlap this list.

AD 800. (Table 17 and Figure 18). Harun al-Rashid is Abbasid Caliph. Japan under Kammu has begun the Heian (Kyoto-capital) period. The Tang have lost central control in China. Vatsaraja and

**TABLE 17. Cities and Their Civilizations: AD 800**

<table>
<thead>
<tr>
<th>OLD OIKUMENE: 52 cities.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central civilization: Bagdad, Constantinople, Cordova, Basra, Fostat (Egypt), Rayy, Alexandria, Mecca, Kairwan, Samarkand, Damascus, Kufa, Mansura (Sind), Anbar (Mesopotamia), Jerusalem, Merv, Caesarea, Rome, Bokhara, Malaya (Anatolia), Kermanshah, Nishapur, Qus (Egypt) (23).</td>
</tr>
<tr>
<td>West African civilization. Gao (1).</td>
</tr>
<tr>
<td><strong>Indic civilization.</strong> Kanauj, Patna, Madurai, Kanchi, Benares, Jayapuram (Kashmir), Ujjain, Ellora (Rashtrakutas), Anhilvada, Bezwada (10).</td>
</tr>
<tr>
<td>Far Eastern civilization. Changan, Loyang, Lhasa (Tibet), Soochow, Wuchang, Chengdu, Tali (Nanchao), Hangchow, Yangchow, Kaifeng, Nanking, Kyongju, Kashgar, Canton, Indrapura (Cambodia), Nanchang (16).</td>
</tr>
<tr>
<td>Indonesian civilization. Prambanan (Java) (1).</td>
</tr>
<tr>
<td>Japanese civilization. Kyoto (1).</td>
</tr>
<tr>
<td>OTHER OIKUMENES: 4 cities.</td>
</tr>
<tr>
<td>Mexican civilization. Copan (Mayas), Tollan (= Tula), Tajin, Tikal (Mayas) (4).</td>
</tr>
</tbody>
</table>
Nagabhata II lead the rise of the Gurjara-Pratihara dynasty in northern India; Pallavas, Rashtrakutas, Ganges, Chalukyas, Pandyas struggle in the south. Charlemagne is crowned Emperor in Rome. Irene is Byzantine empress.

This table marks the first megalopolitan appearance of West African civilization (Gao), and of Indonesian civilization (Prambanan). Gao is placed in the Old Oikumene on the hypothesis that it existed as a desert trade ort shipping gold, ivory, leather and slaves north and receiving salt and "preciosities" in return, Prambanan on the assumption of extensive trade with China, now itself in the Old Oikumene. Japan is considered to have joined the Old Oikumene with China, and to have remained trade-linked to it until after 1600.

Bagdad's prominence begins a long period during which most large cities of Central civilization are under Muslim rule. The degree and duration of this preponderance are demographically in doubt: comparison data from McEvedy will show it as less extreme, and challenged earlier by city growth in West Europe, than the data of Chandler. Mansura, founded in Sind, by caliph al-Mansur, begins the expansion of Central civilization into India. Lhasa and Tali indicate further ethnic diversification of Far Eastern civilization.

Comparison data: As contrasted to the 75-city table in Chandler
and Fox (1974:306), this list loses Edessa, Hamadan, Qum, Zimbabwe, Aleppo, Sivas, Antioch, Siraf; Chunar, Vengi, Thaneswar, Tanjore, Cambay, Ayodhya, Tamralipti, Mau-Sahanya, Vatapi, Gundishapur; Chuanchow, Indrapura (Champa), Pagan, Balasagun (Turkestan), Pyongyang, Tsinan; Nara, Osaka; Monte Alban, Dzibalchaltun; and Palembang (29 cities), and adds Bokhara, Malatya, Kermanshah, Qus; Gao; Madurai, Ujjain, Bezwada; Prambanan; and Tajin; (10 cities), for a difference of \((29 + 10) / (75 + 56) = 39/131 = 29.8\%\).

**AD 900.** (Table 18 and Figure 19). Japan is in the early Fujiwara period. Leo VI rules at Byzantium, struggling with Bulgarians under Tsar Symeon. Caliph Al-Mu'tadid struggles with the Carmathians. Silow adds yet another element to the Far Eastern ethnic mix.

**Vengipura:** Chandler's source (1987:353) cites "Bhimavarman" as the capital of the Eastern Chalukyas of Vengi. Two prospects are to be found in the Godavari delta of Andhra: Vengipura, shown by Schwartzberg (1978:31, map coordinates F6) as the Eastern Chalukya capital; and Bhimavaram, shown (1978:34, coordinates F6) as a small Saivite site. I have accordingly used Vengipura in this list, thereby following the earlier edition by Chandler and Fox (1974:307), which cites "Vengi."

### TABLE 18. Cities and Their Civilizations: AD 900

(61 cities, 900 thousand to 40 thousand, listed by Chandler, 1987:468).

**OLD OIKUMENE:** 59 cities.

**Central civilization.** Bagdad, Constantinople, Cordova, Alexandria, Fostat, Kairwan, Bokhara, Rayy, Nishapur, Samarkand, Mansura, Kufa, Jerusalem, Thessalonica, Tarsus, Caesarea, Hamadan, Ani (Armenia), Siraf, Seville, Preslav (Bulgaria), Atil (= Astrakhan), Merida, Rome, Qus (25).

**Indic civilization.** Maniyakhet (Rashtrakutas), Anhilvada, Kanauj, Chunar (Bengal), Benares, Vengipura, Cambay, Madurai, Bihar, Tanjore, Ellora, Kanchi (12).

**Far Eastern civilization.** Changan, Loyang, Tali, Angkor (Cambodia), Soochow, Hangchow, Chengdu, Wuchang, Nanking, Yangchow, Kai-feng, Kashgar, Kyongju, Canton, Lhasa, Nanchang, Balasaghun (Turkestan), Silow (Khitans), Nanning, Peking (20).

**Japanese civilization.** Kyoto (1).

**Indonesian civilization.** Prambanan (1).

**OTHER OIKUMENES:** 2 cities.

**Mexican civilization.** Tollan, Tajin (2).
Figure 19. Cities Civilizations and the Old Oikumene in A.D. 900

*Shaded Area = Within the Old Oikumene

Comparison data: Vs. its 73-city predecessor (Chandler and Fox, 1974:307), this table omits Damascus, Basra, Mecca, Edessa, Samarra, Aleppo, Sivas, Zimbabwe, Merv, Fez; Monghyr (Pala), Tamarlupti, Quilon, Broach, Thaneswar, Ujjain, Chitor, Ayodhya; Chunanchang, Pyongyang; and Nara (21 cities) while adding Tarsus, Attil, Qus; Madurai; Silow, Nanning; Prambanan; Tollan, and Tajin (10 cities), for a difference of (21 + 9) / (61 + 73) = 30/134 = 22.4%.

AD 1000. (Table 19 and Figure 20). Japan is at the height of the Fujiwara period under the leadership of Michinaga. The Sung have largely reunited China. Otto III is Holy Roman Emperor, Basil II is struggling with Tsar Samuel of Bulgaria. Mahmud of Ghazni is attacking India.

Ghazni is in fact another outpost of Central civilization's expansion into India. Chandler's table shows 71, not 70, cities, but Caesarea also appears as Kayseri.

Comparison data: McEvedy's nearest map (Medieval, AD 1028), covering most of Central civilization, omits Hasa, Rayy, Tinnis, Kairwan, Ani, Jerusalem, Kiev, Qus, Caesarea, Ochrida and Amid from its over 30,000 class; adds Fez, Mahdia, Antioch, Damascus, Wasit, Hamadan and Herat thereto; and has beyond its perimeter Samarkand, Mansura, and Ghazni, giving 22 cities. Despite these exceptions, the overlap with Chandler has increased: (7 added + 11 removed) / (22 in McEvedy + 26 available for overlap in Chandler) = 18/48 = 37.5% discrepancy.
Vs. the 74-city predecessor table (Chandler and Fox, 1974:308; there are 75 entries, but Vengi appears twice), this table omits Edessa, Fez, Hamadan, Damascus, Mecca, Sivas, Lisbon; Vengi, Quilon, Tamralipiti, Kanchi, Monghyr, Kayal; Ningsia, Nanchang,

TABLE 19. Cities and Their Civilizations: AD 1000.

(70 cities, 450 thousand to 40 thousand, listed by Chandler, 1987:469).

OLD OIKUMENE: 68 cities.

Central civilization. Cordova, Constantinople, Cairo, Bagdad, Nishapur, Hasa (Qarmatians), Rayy, Isfahan, Seville, Tinnis (Egypt), Kairwan, Bokhara, Samarkand, Ani, Palermo, Mansura, Ghazni (Afghanistan), Jerusalem, Shiraz, Siraf, Basra, Kiev, Venice, Qus, Thessalonica, Caesarea, Ochrida, Amida, Aleppo (29).

Indic civilization. Anhilvada, Tanjore, Kanauj, Manyakheta, Chunar, Cambay, Somnath, Benares, Thaneswar, Ujjain, Khajuraho (Chandellas) (11).

Far Eastern civilization. Kaifeng, Angkor, Tali, Tsinchow, Hangchow, Soochow, Nanking, Oskend (Turkestan), Wuchang, Songdo (Korea), Nanning, Loyang, Sian (= Changan), Yangchow, Pyongyang, Peking, Pagan (Burma), Fuchow, Kashgar, Balasaghun, Siangyang, Lhasa, Liaoyang (Khitans), Canton, Chengdu, Chunchow (26).

Indonesian civilization. Prambanan (1).

Japanese civilization. Kyoto (1).

OTHER OIKUMENES: 2 cities.

Mexican civilization. Tollan, Tajin (2).

Figure 20. Cities Civilizations and the Old Oikumene in A.D. 1000

Shaded Area = Within the Old Oikumene

* = Largest cities, threshold c. 40 thousand, 70 total.
Binh dinh/Vijaya (16 cities), and adds Ghazni, Qus, Amida; Tsin-chow, Ozkend, Nanning, Pagan, Fuchow, Balasaghun, Siyang; Prambanan; and Tajin (12 cities), for a degree of difference of (16 + 12) / (70 + 74) = 28/144 = 19.4%.

AD 1100. (Table 20 and Figure 21). Shirakawa has established the “priestly retired emperor” camera government in Japan. Che Tsung rules Sung China. Henry IV is Holy Roman Emperor, Alexius I Comnenus Byzantine. The Seljuk Turk empire is beginning to dissolve.

Cahokia, in this table, marks the first megalopolitan qualification of Mississippian civilization, which may have had an oikumene of its own, or may have been (economically) a northward extension of the Mexican oikumene. Ghaznavid Lahore reflects a further expansion of Central civilization into India. It could be argued that Mahmud of Ghazni’s raids serve finally to link the Indic and Central networks; on the assumption that the linkage was only more slowly established, I have retained a separate “Indic” list here. Ninghsia indicates one more shard in the Far Eastern ethnic mosaic.

**TABLE 20. Cities and Their Civilizations: AD 1100**

(70 cities, 442 thousand to 40 thousand, listed by Chandler, 1987:470).

OLD OIKUMENE: 68 cities.

**Central civilization.** Constantinople, Marrakesh, Bagdad, Cairo, Fez, Seville, Tinnis, Isfahan, Nishapur, Merv, Palermo, Rayy, Bokhara, Cordova, Granada, Basra, Venice, Kiev, Bougie (Algeria), Salerno, Thessalonica, Mansura, Lahore, Kaysari (= Caesarea), Qus, Sivas, Diyarbekir, Milan, Edessa, Samarkand, Bust (Afghanistan), Mecca, Meknes (33).

**Indic civilization.** Kalyan the Later (Chalukyas), Anhilvada, Dhar (Malwa), Kanauj, Ramavati (Bengal), Kanchi, Benares, Cambay, Polonnaruwa (Ceylon) (9).


**Japanese civilization.** Kyoto (1).

OTHER OIKUMENES: 2 cities.

**Mexican civilization.** Cholula (1).

**Mississippian civilization.** Cahokia (1).
Comparison data: Vs. its 75-city predecessor from Chandler and Fox (1974:309), this table drops Ghazni, Damascus, Siraf, Hasa, Mahdia; Gangaikondapuram, Nadiya, Chunar, Khajuraho, Cuttack, Quilon, Tanjore, Gaur, Chitor, Mukhalingam; Chengtu, Virapura, Kashgar, Nanchang; and Tula (20 cities). It adds Thessalonica, Mansura, Qus, Diyarbekir, Bust, Meknes; Ramavati, Kanchi; Tsinchow, Indrapura, Siangyang, Fuchow, Chengting, Yunnanfu; and Cahokia (15 cities). Thus it differs by (20 + 15) / (70 + 75) = 35/145 = 24.1%.

Part II of this article will appear in a 1993 issue of the journal.