Inventing the Fertile Crescent: The Chicago Oriental Institute, Prehistory, Biopolitics, and the Making of a Region

AUTHOR
Can Bilsel

"Our Seven Cars Near the Euphrates Crossing at Fallujah." James Henry Breasted, "The Oriental institute of the University of Chicago: A Beginning and a Program," *The American Journal of Semitic Languages and Literatures* 38, no. 4 (July 1922): 257. Courtesy of the Institute for the Study of Ancient Cultures.

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Unlike "the Orient," "the Near East," or "West Asia"—names that Western archaeological expeditions have used to describe this vast and diverse region—the name "Fertile Crescent" appears, at first, empirically precise, if not benign. The boundaries of this ancient region are drawn through quantifiable variations in climate and agriculture; specifically, by the average annual precipitation the region receives, the crops it grows, and the populations it sustains. Generations of schoolchildren learned that the Fertile Crescent was the "cradle of civilization," where ancient practices of agriculture originated. Ancient cities, states, and empires rose, prospered, declined, and fell over control of this region's agricultural output. Recently, the Fertile Crescent has found a new meaning when referring to a once fecund, now arid landscape teetering on the precipice of today's climate crisis.[1]

A closer look reveals that the Fertile Crescent, as a "naturally" designated region, was an outcome of American archaeology, natural sciences, and environmental imagination from the 1910s well into the 1970s. This is not to suggest that the Americans were the first to introduce systematic and cross-disciplinary archaeology to the region.[2] Just as the United States took on a new role in constructing the logistical-strategic space of "the Middle East" in the twentieth century,[3] so the US research university systematically framed the Fertile Crescent. American archaeological knowledge in the Fertile Crescent developed through the collaborations of an international and interdisciplinary network of scientists, amongst which the University of Chicago's Oriental Institute took the lead.

Reflecting on the intersections of environmental imagination and scientific knowledge, I ask a series of questions in this essay. Where does this region's "legitimacy as an epistemic category come from?"[4] How did the Fertile Crescent come to suggest connections between climate, geography, architecture, agriculture, population, and state formation? How did American archaeological reconnaissance missions into the shifting frontiers of the Fertile Crescent help coordinate between the scales ranging from "naturally" managed landscapes (e.g., watersheds, plains, valleys), to larger, strategic space ("the Middle East")?

An equally important question is to what extent the Fertile Crescent—especially in its earlier formulations—mediates the United States' own settler colonial ethos and the conquest of the American West as seen from Chicago, "nature's metropolis."[5] American archeologists translated the biopolitics of conservation, watershed management, and

The Oriental Institute of the University of Chicago conducted archaeological reconnaissance and excavations across a vast region from Egypt to Iran, framing it as the "Fertile Crescent." Braiding environmental imaginaries and scientific knowledges, the region was naturalized as a particular figuration of climate, geography, architecture, agriculture, population, and state formation, showing how American scientific missions created a "natural" landscape that was key to the larger logistical-strategic space of the "Middle East."

PROJECT

The Region: Architectural Histories of a Naturalized Concept

land occupation, and the way US geological surveys morphed into an ethnological survey of the Indigenous peoples of North America (in short, a settler colonial territoriality that studied geology, hydrology and ethnology as part of the same project) into this distant region which they defined, like the American West, by aridity.[6]

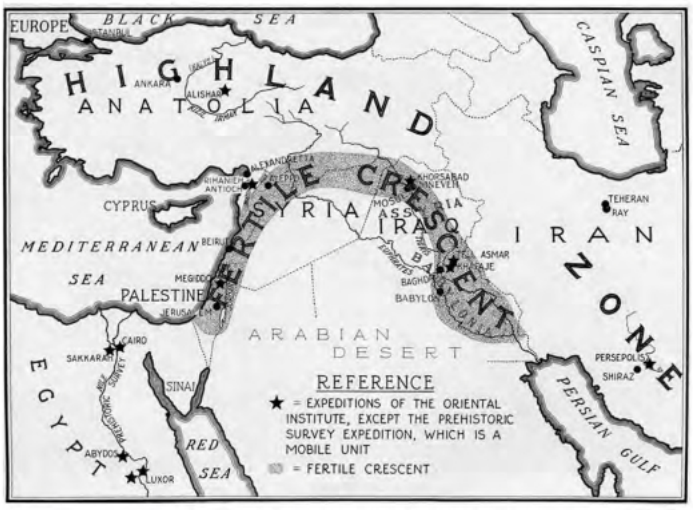


Fig. 1. "Map showing the Field Operations of the Oriental Institute in the Near East." The original caption reads: "The entire region comprises the Highland Zone in the north, the Desert and the Nile Valley in the south, and the Fertile Crescent lying between the Desert and the Highland Zone. Stars indicate the locations of the Institute's field expeditions or other scientific projects... It will be seen that the expeditions have been strategically distributed with six expeditions in Asia —one at each end of the Highland Zone and others at four points along the Fertile Crescent—and likewise six expeditions in Egypt and Northeast Africa."
James Henry Breasted, *The Oriental Institute, The University of Chicago Survey*, vol. XII (Chicago: The University of Chicago Press, 1933). Courtesy of the Institute for the Study of Ancient Cultures of the University of Chicago.

From 1919 onward, the Oriental Institute of the University of Chicago conducted archaeological reconnaissance and excavations in a vast area extending from Egypt to Iran. A map published in *The University of Chicago Survey* of 1933 asserts that the Institute's field operations were "strategically distributed" across the region. The map divides the "Near East" into natural zones defined by aridity, a geographic-climatic property: the "Highland Zone," the "Desert," and the "Fertile Crescent." Prominently drawn at the center, the "Fertile Crescent" extends from the eastern shores of the Mediterranean to the Persian Gulf, crossing the modern lands of Mandatory Palestine, Lebanon, Syria, Iraq, and parts of Turkey and Iran.

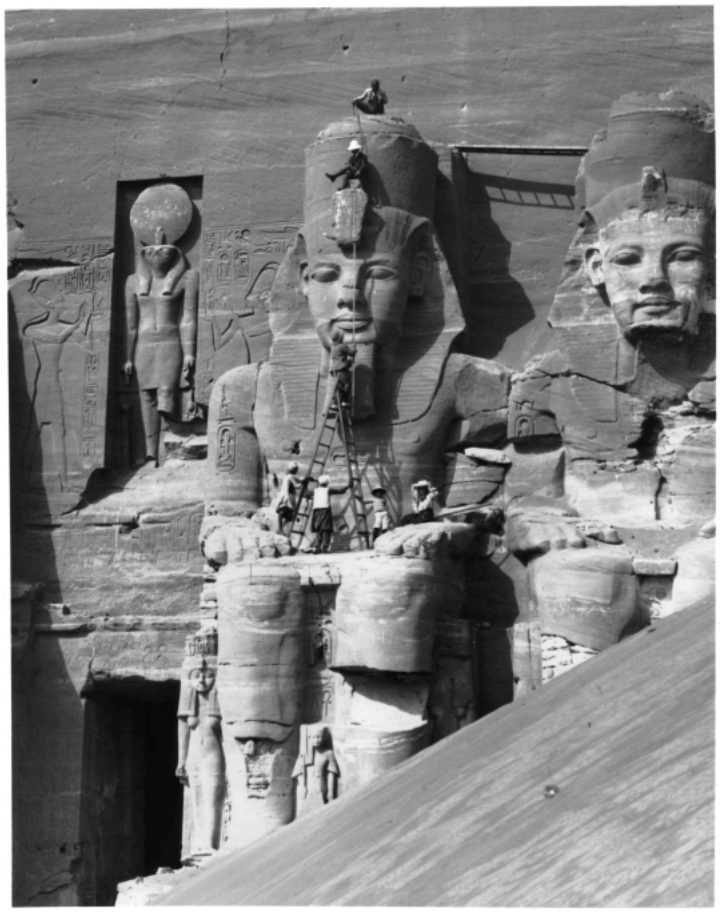


Fig. 2. James Henry Breasted sits atop the third colossus of Ramesses II at Abu Simbel, January 1906.
Courtesy of the Institute for the Study of Ancient Cultures of the University of Chicago.

James Henry Breasted (1865–1935), an American Egyptologist and founding director of the Oriental Institute, initially popularized the "Fertile Crescent" in the 1910s to refer to a particular geographic-climatic formation in West Asia—a narrow, cultivable stretch of land on the edge of the Arabian desert.[7] Shortly after, the Fertile Crescent came to refer synecdochically to the entire region where, Breasted argued, "man" had *independently* invented "agriculture, metals, and writing."[8] The conflation of a geographic formation (legible only by aerial reconnaissance or a map) with a supranational region persisted throughout the first half of the twentieth century. Historian Thomas Scheffler observes this confusion of scales, writing that Breasted's Fertile Crescent "telescoped" multiple archaeological landscapes into a unified "macro-space."[9]

Migrating to numerous disciplines (prehistory, archaeology, and botany) and post-independence political discourses in the "Middle East," the Fertile Crescent's frontiers have proven to be remarkably fluid.[10] Beginning in the late 1940s, University of Chicago Oriental Institute archaeologists

Robert J. Braidwood and Lind S. Braidwood revised the Fertile Crescent to an assemblage of "natural habitat zones." This "crescent" significantly departed from Breasted's strategic, unifying macro-space. The focus of postwar archaeology shifted to "the origins of food-production," which referred to smaller and carefully selected natural landscapes where the domestication of plants and animals had occurred: sites and systems of "incipient agriculture" and early farming communities on the "hilly flanks" of the Zagros and Taurus Mountains (extending across Iran, northern Iraq, and Turkey).[11]

I shall begin by tracing the Fertile Crescent back to the immediate aftermath of the Great War, when American expeditions and field research began to reshape human sciences, archaeology, prehistory, and anthropology. US scientists re-entered the region following the military logistics of the British occupation of 1917–18. The University of Chicago expedition of 1919-20 used some of the same equipment (e.g., bomber aircraft, machine gun-mounted convoys, and railways) that the British deployed in occupying, controlling, and pacifying the region.[12]

As America's "scientific philanthropy"—especially the John D. Rockefeller Foundation—funded new ambitions overseas, the University of Chicago's Oriental Institute began an effort to make the humanities an exact, natural science.[13] By 1936, when a reduction in the Rockefeller Foundation funds led to the retrenchment of the Oriental Institute, multi-year archaeological campaigns had already been conducted at Megiddo in Palestine, Alişar in Turkey, and Persepolis in Iran, in addition to stratigraphic expeditions in the Amuq Valley, along the Tigris and the Euphrates, and numerous expeditions and surveys in Egypt, Syria and Iraq.[14]

This essay surveys the continuities as well as ruptures in American scientific framings and reframings of the spaces of the Fertile Crescent. The colonial territorialization of the land as a biopolitical, strategic, logistical space after the Great War informed mid-century archaeological techniques and spatial practices. The Oriental Institute's stratigraphy techniques developed in the 1930s laid the foundations for The Prehistoric Project, which focused on the "origins of food production" from 1948 into the 1970s and fragmented the biopolitical space of the Fertile Crescent into coordinated sites, archaeological landscapes, natural habitats, ecological systems, and human subsistence patterns. The study of material culture, architectural strata, geographic spaces, and natural habitats came to be intertwined with long-lasting

implications for the human sciences and architectural history.

Territorialization

In *Ancient Times,* published in 1916 and reprinted in numerous editions to become one of the best-selling textbooks in America and the English-speaking world,[15] James Henry Breasted describes the Fertile Crescent as a geographic, climatic, and agricultural-productive threshold: "a borderland between the desert and the mountains, a kind of cultivable fringe of the desert."[16]

> This fertile crescent is approximately a semi-circle, with the open side toward the south, having the west end at the southeast corner of the Mediterranean, the center directly north of Arabia, and the east end at the north end of the Persian Gulf… It lies like an army facing south, with one wing stretching along the eastern shore of the Mediterranean, and the other reaching out to the Persian Gulf, while the center has its back against the northern mountains.[17]

In *Ancient Times*, Breasted offers a diffusionist theory—that civilization was first invented in ancient Egypt and traveled along a singular path to the "Fertile Crescent" in West Asia and to Europe. The Fertile Crescent appears in his text as a corollary of Eurocentric teleology that correlated the environment, climate, geographic formations, and human types. While there was little new about this theory, Breasted proved to be an effective popularizer.[18] In an effort to make the Near East intelligible to American readers, *Ancient Times* draws from America's own settler-colonial experience:

> Arabia is totally lacking in rivers and enjoys but a few weeks of rain in midwinter; hence it is a desert very little of which is habitable. Its people are and have been from the remotest ages a great white race called Semites. The Semites have always been divided into many tribes and groups, just as were the American Indians, whom we call Sioux, or Seminoles, or Iroquois.[19]

According to Breasted, the people of "Arabia" are classified into "settled agricultural peasants" and "wandering desert nomads." The nomads transition into a settled life of

agriculture when they "secure a footing" on the Fertile Crescent, due to "a great tidal wave of migration."[20] He understood Indigenous tribes as ahistorical natural actors competing for control of scarce territorial resources and of territorial production.

Breasted's textbook had a remarkable afterlife in American secondary education. Lindsay Ambridge has examined how Breasted's revisions to the second (1935) enlarged edition of *Ancient Times* pivot around an increasingly biological notion of race. In the 1935 edition, Breasted argued that the "black world of Africa" played no role in the birth of civilization in ancient Egypt.[21] Breasted's additions to his textbook transformed the Fertile Crescent from a mere diagram into an ideological postulate that mapped "the great white race" on an abstract, macro-space that crossed North Africa, West Asia, and Europe.

In 1917, shortly after the publication of the first edition of *Ancient Times*, the British colonial armies pushed north from Suez to Jerusalem as well as from the Persian Gulf to Baghdad. The British Egyptian Expeditionary Force and the Royal Air Force routed the Ottoman and German defenses near ancient Megiddo in Palestine. Damascus and Aleppo fell in short order. The Fertile Crescent acquired a new operative meaning above and beyond making ancient history intelligible to American school children. In his map, Breasted substituted the Ottoman provinces with the new colonial logic of a "natural" geography. The arc that Breasted drew on the map mirrored the territories carved out in the Sykes-Picot Agreement of 1916 and the Anglo–French Modus Vivendi of 1918, which divided the Occupied Enemy Territory into colonial spheres of influence, and later, British and French Mandates for Iraq, Palestine, Syria, and Lebanon.

Breasted, who had embraced Berlin as his second home during his doctoral studies and early career in Germany, then refashioned himself during the Great War as a staunch defender of the strategic, military interests of America's British allies. An article Breasted wrote in the American monthly magazine *The Nation* in June 1918 begins with the following convoluted, geopolitical assessment:

> As long as the leading naval Power of modern times [Great Britain] has its home in the Atlantic, with great responsibilities in the Pacific, Asia Minor, overlooking as it does the line of communication between these two oceans, must inevitably remain a position of commanding and decisive importance. A

> hostile Power in Asia Minor always threatens Suez; without the Suez England cannot command the Pacific, and without English supremacy in the Pacific our own standing there is at once jeopardized.[22]

Breasted forcefully argued that the British must invade and occupy the "narrow cultivable" land (the Fertile Crescent) along the Eastern Mediterranean—Palestine, Lebanon, and Syria—extending all the way to Southeastern "Asia Minor." This was because Britain's foe in WWI, the Ottoman Empire, had launched a failed military campaign to reconquer Suez in Egypt and still loomed as a geopolitical threat to Egypt and the Suez Canal. Flattening the time that elapsed between ancient times and modern mechanized warfare in the Middle East, Breasted assumed that his knowledge of an ancient Egyptian-Hittite battle in Syria, fought in the same geographic space more than two millennia ago, qualified him to offer strategic military advice to the British Empire:

> This intercontinental bridge, which the British commander, like many Pharoah before him is battling to recover, will never be safe without such an adjustment in Asia Minor as to render the peoples there either securely friendly or permanently powerless.[23]

So staunch was Breasted in defending the interests of the British Empire that the editors of *The Nation* offered a rebuttal, reminding the readers of the designs of other colonial empires (the French and the Italians) in the region. The editors also mentioned the "legitimate national aspirations" of the "population of these sections" in the former Ottoman lands.

Fig. 3. James Henry Breasted in front of a British Royal Air Force airplane at the Heliopolis Aerodrome, Egypt, January 1920. Courtesy of the Institute for the Study of Ancient Cultures of the University of Chicago.

The commander of the British Empire's Egyptian Expeditionary Force, General Edmund Allenby, whom Breasted compared to an Egyptian Pharaoh, offered Breasted access to the upper echelons of the British government. In 1919, Breasted traveled to Egypt to prepare for the University of Chicago's scientific expedition to the Fertile Crescent. The military logistics that the British deployed during the invasion of 1917–18 facilitated the expedition, and to a certain extent, defined its itinerary. In Cairo, Allenby—newly appointed Viceroy of Egypt—put a plane and a pilot of the Royal Air Force at Breasted's disposal when he wished to photograph "the desert margin from an airplane."[24] These photographs offer an early glimpse of

Breasted's interest in aerial reconnaissance, allowing him to trace a hypothetical geographic "borderland" between alluvial plains and the desert.[25]

Fig. 4. "Our Seven Cars Near the Euphrates Crossing at Fallujah."
James Henry Breasted, "The Oriental institute of the University of Chicago: A Beginning and a Program," *The American Journal of Semitic Languages and Literatures* 38, no. 4 (July 1922): 257. Courtesy of the Institute for the Study of Ancient Cultures.

The Chicago scientific expedition sailed on February 18, 1920, from Port Said to Mumbai, and then to Basra. As they crossed Iraq, the British High Command provided the Americans with the use of a narrow-gauge railway, a logistics "goods van," numerous staff cars, a bomber plane, and a military escort. North of Baghdad, the Chicago expedition used what remained of the German-Ottoman railways and pursued motorized excursions from their train to ancient sites. The Chicago team followed the "crescent" and crossed the territories controlled by the short-lived Arab State and the French-controlled Syria. Breasted, who celebrated the "enlightened government[s]" of the British and the French, was indifferent to the Declaration of Independence that the nationalist members of the Syrian (Arab State) Parliament shared with him.[26] Upon his return to Egypt, Breasted was dispatched to London by General Allenby to report on "the unrest of the Western Arabs."

A clear pattern emerges in Breasted's reports. He argued on numerous occasions that the history of West Asia may be defined by an "age-old struggle" between the sedentary agriculturalists and wandering nomads, "a struggle which is still going on—for the possession of the Fertile Crescent, the shores of the desert bay."[27] The photographs the Chicago expedition took along the Euphrates Valley confirmed Breasted's theory of scarce territorial resources. A figure caption reads:

Fig. 5. "A Typical Euphrates Landscape Above Salihiya." James Henry Breasted, "The Oriental institute of the University of Chicago: A Beginning and a Program," *The American Journal of Semitic Languages and Literatures* 38, no. 4 (July 1922): 263. Courtesy of the Institute for the Study of Ancient Cultures.

> *A Typical Euphrates Landscape Above Salihiya:* Showing how the cliffs of the desert plateau approach the river, leaving too narrow a margin for the support of an agricultural population. … It is evident that this region never has supported a settled agricultural population large enough to develop a great nation or any degree of political power arising from so scanty a material basis.[28]

University of Chicago Assyriologist and member of the expedition, Professor D. D. Luckenbill, endorsed this view in an article he published in 1923: "whatever prosperity Syria may have possessed from time to time in the course of her history, it rested, not upon broad acres of arable land, but upon her strategic position commercially."[29]

The Fertile Crescent served as an organizing paradigm of US academic knowledge about the region, not because everyone accepted that a borderland "on the shores of Desert Bay" existed (they did not), but because they took for granted that "a settled agricultural population" was the *sine qua non* of civilization. Favorable climate, average annual rainfall, or irrigation created an agricultural surplus, which led to a great nation, worthy to be included in "the human story." From the 1920s onward, American archaeological expeditions into the region surveyed agriculture, irrigation, and topography, not only to discover the beginnings of civilization, but also to determine if any stretch of land in the region could naturally sustain a civilized state.[30]

The framing of the occupied lands as "the Fertile Crescent" shortly after a mechanized war—and in the midst of the

British and French Empires' violent counterinsurgency campaigns in Iraq and Syria—is hardly a benign commentary on the environment by the occupiers and by their American allies. Mapping the Fertile Crescent as an inert fact of nature helped flatten the complex cosmopolitan and classed societies of the region into sectarian "indigenous tribes," dismissed anti-colonial resistance, and dismissed the people's aspirations for self-determination as a supposedly timeless struggle of "natives" for scarce natural resources.[31]

The Chicago Oriental Institute's archaeological reconnaissance mission into the Fertile Crescent was conversant with American anthropology and the US Geological and Geographic Surveys. In the American West since the second half of the nineteenth century, field surveys brought together ethnological classification of the Indigenous peoples of North America (usually based on linguistics, but also material cultures) with a survey of natural geography.[32] Although it is not clear when Breasted and his fellow Orientalists started reading American anthropologists studying Native Americans as a means of testing the ideas of cultural diffusion, Breasted publicly praised Clark Wissler's 1917 book *The American Indian: An Introduction to the Anthropology of the New World*.[33] Wissler starts his book by mapping Native American tribes by their "food areas"—a natural geography of sustenance—based, in part, on the presence or absence of agriculture. Wissler then maps utensils and techniques, before reassessing an earlier classification of Native Americans into linguistic groups in John Wesley Powell's 1891 *Indian Linguistic Families in America North of Mexico*.[34]

In the American West, the subdivision of territory into environmentally sustainable "natural districts" was part of the sovereign, white-settler state formation. As John Wesley Powell (who famously explored the Grand Canyon of the Colorado River) wrote, "natural districts" were at once naturally delineated land and "a commonwealth within itself"—naturalizing settler self-government and self-determination.[35] In contrast, Native Americans were systematically denied the right of sovereign self-determination and were mapped into the land surveys as cultures, distinct from sovereign societies.[36]

Perhaps not coincidentally, the British and French colonizers partitioned the Fertile Crescent into much smaller administrative states with little regard for the climatic, agricultural-productive, biopolitical divisions that Chicago scientists had been contemplating as early as 1919. Paradoxically, as Thomas Scheffler has shown, the "Fertile

Crescent" was adopted in the 1940s by a political movement in Lebanon and Syria that rejected political borders drawn by the British and the French in the Middle East and that sought to unify the land into a naturally, historically self-evident territory—a state which would be known as "Greater Syria," or "Syrian Fertile Crescent." Thus, the Fertile Crescent was translated from American archaeology and human sciences to a multi-ethnic and multi-religious brand of territorial (mostly Arab) nationalism.[37]

The Chicago Oriental Institute Archaeology Network: A Mesh and a Sieve

By *The Chicago Oriental Institute Archaeology Network* I refer to the aggregate of all of the following: endowed university faculty positions dedicated to the study of the ancient Near East; resident and non-resident archaeologists who conducted the institute's field operations; the boards of philanthropic organizations that funded fieldwork overseas; techniques of archaeological reconnaissance and inventory; the indexing and archiving of words and contexts in the dictionaries of ancient languages; typological assessment of the inventories of material culture; boundaries of disciplinary expertise as negotiated in allocating faculty positions, doctoral fellowships and undergraduate courses; the organization of the institute headquarters and museum in Chicago; regional headquarters and sprawling local research centers, excavation houses and laboratories dedicated to the preservation and reproduction of material culture and sites; and material infrastructures and logistics that sustained the field operations of the Institute in Syria, Mandatory Palestine (later Israel), Egypt, Turkey, Iraq and Iran.

In his history of the US research university, *Knowledge Worlds: Media, Materiality, and the Making of the Modern University,* architectural historian Reinhold Martin writes about "numerous gates, passages, and thresholds—both spatial and temporal" through which the modern American university has "secured knowledge, consolidated power, and laid claim on universality through the regular, carefully orchestrated opening and closing of doors."[38] Martin's discussion of gates, passages, and thresholds accounts for the University of Chicago's simultaneous internment of academic disciplines into spaces of enclosure and their expansion into a vast colonial territory. If the Department of Oriental Languages and the Oriental Institute Museum in Chicago are enclosed microcosms of the ancient "Orient,"

the unprecedented, rapid expansion of the *field operations* recalls "a sieve whose mesh will transmute from point to point."[39] Like a gold prospecting pan set—or the sieves of American archeologists—the network stacked up classifiers and screens. Expert knowledge, material cultures, discourses, academic disciplines, and field operations passed through these superimposed, intertwined filters.

At the Oriental Institute's US headquarters in Chicago, the Institute shared and supplemented endowed faculty positions with the Department of Oriental Languages. As of *The University of Chicago Survey* of 1933, the teaching positions included:

- *Oriental History*
  - Professor A. T. Olmstead
- *Oriental Archaeology*
  - Not yet appointed [as of 1933]
- *Hebrew and Old Testament*
  - Professor William C. Graham
  - Professor William A. Irwin
- *Egyptology*
  - Old and Middle Egyptian
    - Assistant Professor John A. Wilson
  - New Egyptian, Demotic, and Coptic
    - Associate Professor William F. Edgerton
- *Assyriology*
  - Assyrian
    - Professor Edward Chiera
    - Assistant Professor F.W. Geers
  - Sumerian and Akkadian
    - Professor Arno Poebel
- *Hittitology*
  - Assistant Professor Arnold Walther
- *Arabic, Aramaic, and Syriac*
  - Professor Martin Sprengling

> [T]here is included with the teaching endowment a fellowship fund providing ten annual fellowships [for doctoral students].[40]

The Oriental Institute's field directors and operatives were recruited from an international group of archaeologists, including those from Austria, Czechoslovakia, Denmark, Hungary, Italy, Norway, Palestine, Poland, Portugal, Russia, Sweden, Switzerland, and Syria, in addition to England, France, Germany, Holland, and the United States. "There is not a single chair of oriental archaeology in the entire United States," lamented Breasted in 1933. "Of the existing archaeologists, whether classical or oriental, very few have ever had any extended field experience."[41] Training the next generation of American field archaeologists emerged as one of Breasted's stated goals. Staffing needs were met by assigning University of Chicago doctoral students to excavations and by moving teams from one expedition to another.

The Oriental Institute's archaeological expeditions both benefited from and competed against the European colonial powers. In 1930–31, Breasted enlisted Ernst Herzfeld, the preeminent German archaeologist of ancient Persia, as the director of the American excavations in Persepolis. By taking over Persepolis, the Oriental Institute effectively ended the French government's monopoly on archaeological excavations in Iran. Around the same time, the Oriental Institute also cultivated a close partnership with the rank and file of the French colonial administration of antiquities headquartered in Beirut and in the Sanjak of Alexandretta.[42] The American collaboration with the French colonial administration included appointing a French administrator, Claude Prost, as the first field director of Amuq (Plain of Antioch) expedition (although he was replaced a year later).[43] Thus, the Oriental Institute worked simultaneously with and against the French colonial interests in the Eastern Mediterranean and Iran, on the west and east ends of the Fertile Crescent.

Breasted's pragmatism in expanding the network by absorbing European expertise from diverse sources makes it unlikely that the Oriental Institute's expeditions in the Near East were directed from a center to fulfill a singular vision. Recalling Breasted's Map of the Field Operations of 1933, the excavations might have been initially distributed geographically along the Fertile Crescent, yet how they developed and what they found were contingent on seizing opportunities that arose on the ground.

What, then, brought all these field operations together? A binding feature of the University of Chicago's Oriental Institute was a shared discursive disposition, both among the institute's resident and non-resident international scholars and field archaeologists, toward uncovering material evidence. The Chicago network played a role in redefining field archaeology, prehistory, and human sciences into an exact, laboratory science. In "The Oriental Institute of the University of Chicago: A Beginning and a Program" of 1922, Breasted wrote:

> The members of the expedition have all returned more deeply impressed than ever before with the fact that the Near East is a vast treasury of perishing human records, the recovery and study of which demand a comprehensive plan of attack as well organized and developed as the investigation of the skies by our impressive group of observatories, or of disease by our numerous laboratories of biology and medicine… Furthermore, any ancient city with its streets, buildings, walls, gates, water-works, drains, and sanitary arrangements is itself a fascinating and instructive record of human progress and achievement, which must be studied, surveyed, and recorded. In the same way the geology, botany, and zoölogy [sic] of the Near East must be investigated to reveal the character of the habitat and resources of the earliest civilized communities of men.[44]

This comprehensive approach to archaeology required that American scientists and engineers live on site for years, until an ancient city was fully excavated. Breasted modeled the field organization of the Institute's excavations after the multi-year excavations that the German Orient Society (DOG) had conducted in Mesopotamia before the Great War.[45] He admired the work of the German architects and archaeologists (Robert Koldewey and Walter Andrae) who had systematically hauled away and documented massive archaeological deposits in Babylon and Assur for nearly two decades.[46] The collapse of the Ottoman Empire and the British occupation of Iraq brought the German excavations to a halt in 1917.

The Chicago Oriental Institute's first large-scale excavations took place in Megiddo in Mandatory Palestine. Replicating the German approach in Assur, which Breasted visited in 1920, the institute systematically removed archaeological strata until reaching the bedrock. Photographs of Megiddo from the 1920s evoke a modern mining operation. Eric

Cline's monograph of the excavations chronicles corporate hierarchies of labor. Hauling away massive amounts of dirt down to the bedrock required management, mechanized disposal of the debris, and a sustained workforce of indigenous and migrant labor.[47]

Fig. 6. James Henry Breasted photographed during the filming of *The Human Adventure* (1935).
Courtesy of the Institute for the Study of Ancient Cultures of the University of Chicago.

The Oriental Institute's 1935 documentary film *The Human Adventure* dramatizes the archaeological method employed at Megiddo; Breasted makes an appearance 34 minutes into the movie, as the camera rolls into the excavations at Megiddo. A narrator describes at length the process of registering the finds:

> The objects are removed from the tomb, placed in baskets tagged with the exact location of the finds and taken to the exhibition headquarters. Freshly discovered objects are treated much like newly arrested prisoners brought in a detective bureau for identification. Every known fact about the discovery of the object is copied from the basket tag and a serial number is placed on each separate piece. Everything is photographed in detail, and if it had fingers her prints would be taken.[48]

The way Breasted describes archaeology as a large-scale forensic operation of "arresting" objects is striking. The stratigraphic method that focuses on geological/material deposits, as opposed to archaeology's traditional emphasis on inscriptions and monuments, reveals a shift from

Orientalist-philological knowledge towards natural sciences (geology, botany, biological anthropology), as well as a growing fascination with prehistory.

The Oriental Institute's early excavations amounted to a transfer of technical expertise from European (especially German) field archaeology to the Chicago archaeological network. This knowledge transfer also foreshadowed the emergence of archaeological research and site conservation as potential fields of international cooperation and development.[49] Breasted, who coordinated the shipping of numerous archaeological artifacts to the Museum of the Oriental Institute in Chicago and to various other museums in the United States, also pursued a long-term strategy of building a network of research centers, labs, and museums in the region of the archaeological sites that would be kept under American and European tutelage.

As Jeffrey Abt noted, Breasted's collaboration with the Rockefeller philanthropic organization underwrote a number of museum projects, including the Palestine Archeological Museum in Jerusalem (built 1927–35), now the Rockefeller Museum.[50] Breasted also proposed a 10-million-dollar archaeology museum for Cairo, which Rockefeller would gift to Egypt, in return for ceding control of antiquities to a board led by Breasted and a selection of European museum directors. Thus, European control of antiquities would continue by American power of the purse —until a generation of American museum and conservation specialists could be trained. Breasted's proposal was rejected by the Egyptian government.[51]

Circulations and Stratigraphic Behaviors: Architecture Takes Command

Writing in 1949, on the thirtieth anniversary of the Oriental Institute of the University of Chicago, Thorkild Jacobsen and John A. Wilson distanced the institute from the "genius of its founder and first staff."[52] Henry James Breasted conceived and set up the Institute as "an organized endeavor to recover" the origins of European civilization in the Near East. Thirty years on, Breasted's story of "the rise of man" from barbarism to civilization came across as dated—"our appreciation is relative to what was deemed satisfactory at that time."[53] Jacobsen and Wilson contend that the Oriental Institute's collective achievement consists in devising "advanced methods of field archaeology":

> if we would roll into one ball the total efforts and results of these thirty years and ask what "the" achievement of the Institute has been, the answer must be given in terms of recovery of evidence. "The" contribution of the Institute is the comprehensive framework of comparative stratigraphy of the ancient Near East which can now be established. A major share of that unspectacular but basic achievement was contributed, we believe, by the Oriental Institute.[54]

One outcome of the Oriental Institute's approach that favored geological, geographic survey was the identification of "naturally" coordinated archaeological regions where the Institute sent reconnaissance missions: the Nile Valley (for the prehistoric survey), the Amuq Valley, the Central Anatolian Plateau, Northern Iraq, and Southern Iraq, among others. In 1949, Jacobsen and Wilson argued that one outcome of these expeditions was to establish "the complete stratigraphic sequence" for each region.

Robert Braidwood's (1907–2003) survey of the Amuq Valley (or the Plain of Antioch) is a case in point. The "Amuq sequence" is understood today as a standard reference for establishing chronologies of ancient material culture in the surrounding regions of Anatolia, Syria, and Northern Mesopotamia—a yardstick in field archaeology. Yet, Braidwood's method was not limited to comparative stratigraphy, ordering "artifactual traces" of a site into a vertical sequence of cultural periods. It also processed and coordinated a large number of archaeological data points with one another and with the surrounding region.

Trained as an architect and anthropologist at the University of Michigan, Robert Braidwood joined the Oriental Institute's "Syrian-Hittite" (later renamed "Amuq") expedition and arrived in the Plain of Antioch in 1933, which Calvin Wells McEwan directed from 1933 onward. The team started excavations at three of the larger mounds in the Plain of Antioch: Çatal Hüyük (not to be mistaken for the better-known prehistoric Çatalhöyük in Konya, Turkey), Tell Tayinat, and Tell Judaidah.[55] Initially, the Chicago team was looking for late "Hittite" structures from the first millennium BCE, but the three sites that the Chicago team excavated revealed a rich sequence of artifactual deposits from prehistoric to Islamic periods. Sherds of material culture from nearly all cultural periods of the Amuq Valley were found and identified at Tell Judaidah, with that site

thus presenting the most complete stratigraphic record of the three.

The "Tell Judaidah Chronology" that Braidwood published in 1937 ordered the strata of the artifactual deposits found there into "cultural periods" I through XIV. The Roman numeral I is assigned to the most recent period (about 350–600 CE) and XIV to the most distant. Braidwood based this ordering of time on objects. For example, the period XIII is identified with the "earliest appearance of metal." Period XI (3100–2600 BCE) is tagged: "At the end of this period the indigenous painted series commences…"[56]

Artifacts circulated in ancient times, and they were combined and entangled with other artifacts. According to Braidwood, architecture determined the "stratigraphic behavior" of artifacts. Material culture found on site is interpreted as a "cultural period" when they are found in, or otherwise attributed to, a "regular architectural level." Cultural periods were often literally framed by two superimposed architectural floors from successive periods. Once the Oriental Institute's team achieved a near-complete stratigraphy of Tell Judaidah, Braidwood applied it as a point of reference to the cultural sequence of other sites in the same natural region.

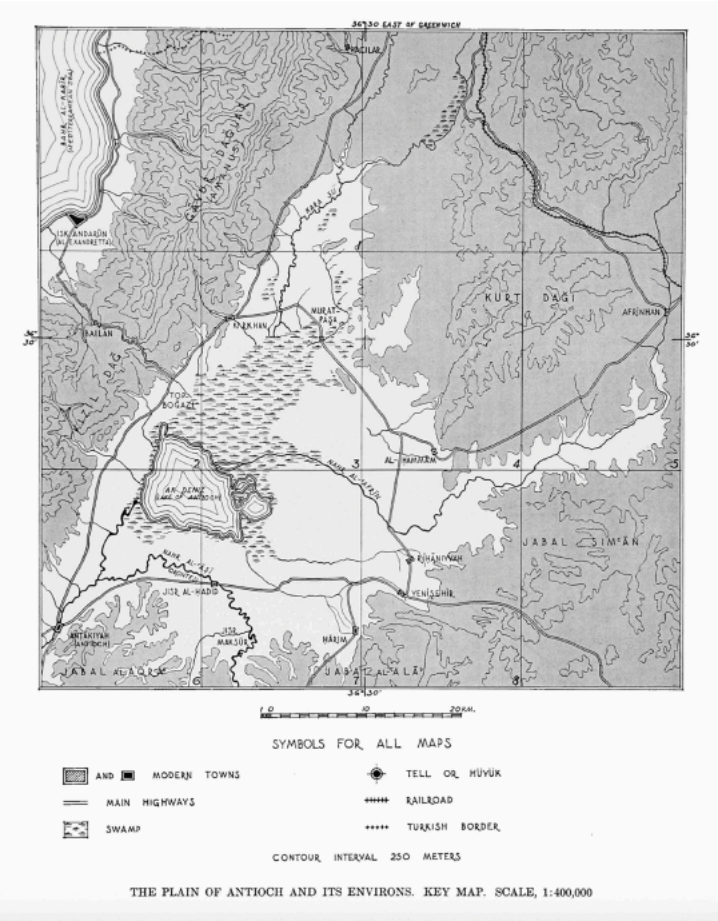


Fig. 7. "The Plain of Antioch and its Environs. Key Map." Robert J. Braidwood, *Mounds in the Plain of Antioch: An Archaeological Survey* (Chicago: The University of Chicago Press, 1937), frontispiece. Courtesy of the Institute for the Study of Ancient Cultures of the University of Chicago.

In his 1937 report, *Mounds in the Plain of Antioch: An Archaeological Survey*, Braidwood described his project as the "complete reconnaissance of an area to discover what, if anything, within that area is of archaeological interest."[57] The Plain of Antioch and its tributary river valleys, Orontes and Afrin, Braidwood argued, lent themselves perfectly to a survey: surrounded by mountains, this area often amounted to a naturally delimited "political unit" in ancient times.

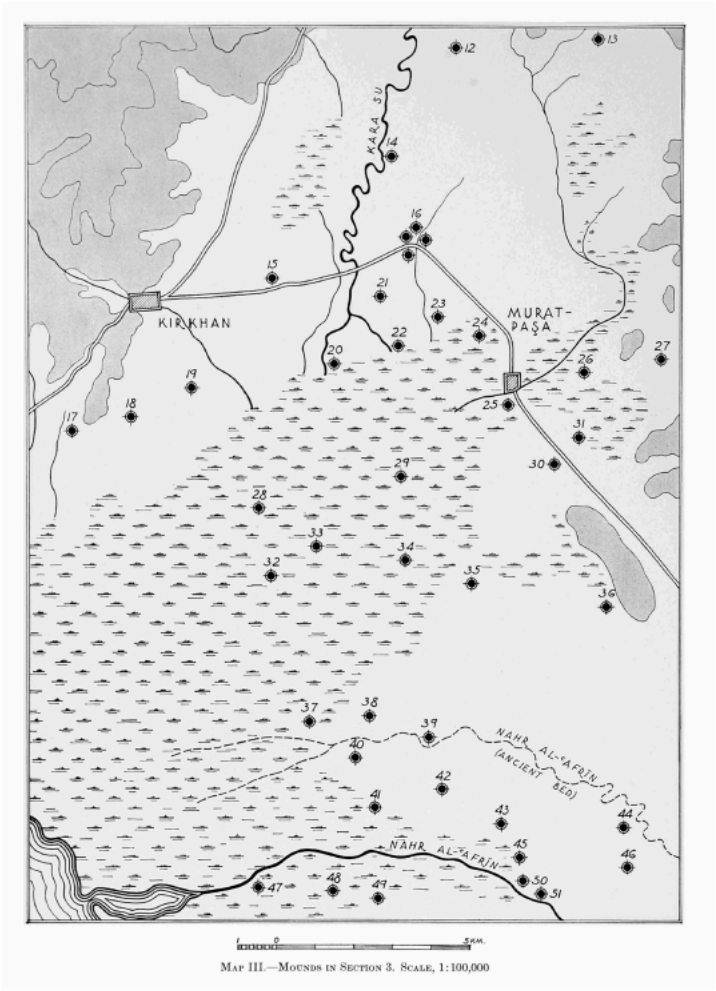


Fig. 8. "Map III.—Mounds in Section 3."
Robert J. Braidwood, *Mounds in the Plain of Antioch: An Archaeological Survey* (Chicago: The University of Chicago Press, 1937), 14. Courtesy of the Institute for the Study of Ancient Cultures of the University of Chicago.

Various entities of the French colonial government produced the maps of the region available to Braidwood. These maps ranged in scale from military reconnaissance maps (1:200,000, 1:500,000), to maps for the "agricultural improvement" of the states of the Levant under French mandate (1:40,000 and 1:10,000), to cadastral village maps (1:5,000).[58] Using these French colonial maps, Braidwood identified 178 mounds of archaeological interest on the alluvial plane and in the watershed of the tributary rivers.

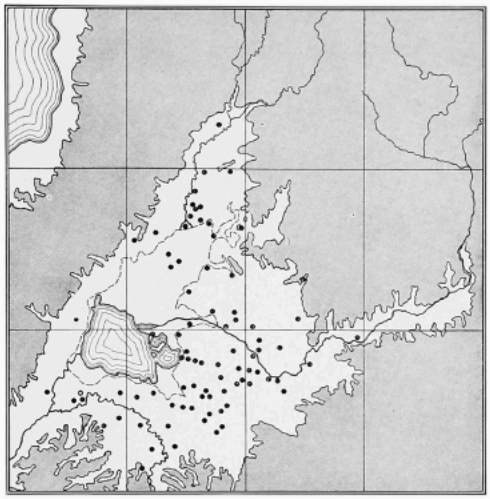
For three weeks in Spring 1936, Braidwood, along with the head foreman Abdullah Said Osman al-Sudani, two workmen "who knew the plain well and spoke Turkish, Kurdish, as well as Arabic," and "several boys," collected sherds from open fields on or near these mounds:

> Each collector was given a sack and told to collect all the sherds he could find… When the party returned to the exhibition house, the sherds were washed and

> then sorted, and notes were made as to the period represented in terms of the ceramic chronology of Tel al-Judaidah… If three or more contemporary sherds appeared from different parts of the mound, their period is considered to have been present on that mound and is listed without reservation.[59]

This amounted to a heuristic method: the absence of sherds that could be reliably attributed to a period in Judaidah chronology did not rule out that a mound might have been occupied during that period. No exhaustive excavations were carried out in most of these 178 sites. Many sites were marked as "possibly" or "probably" occupied due to questionable evidence.

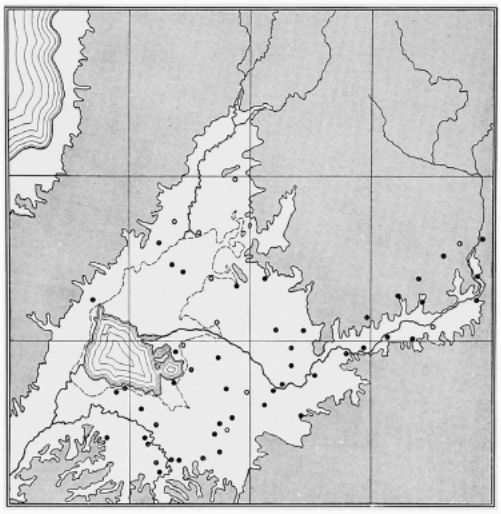
Both objects themselves and the techniques of manufacturing had circulated. A key assumption of Braidwood's method is that every portable artifact found in a stratum had potentially circulated in a given period of time. Ceramic wares, flint and bone implements, stamp seals, amulets, and figurines all moved within the Amuq Valley, and less frequently, but surely, across the Near East during a given cultural period. "Mesopotamian cylinder seals" that had traveled long distances presented a breakthrough in approximating the dates of the stratum where they were found. Typological analysis of ceramic wares and the mapping of a large number of mounds enabled Braidwood to determine whether some artifacts were "indigenous," "provincial," or "imported."



Map XII.—Distribution of Medieval-Arab Wares

The Medieval–Arab period is represented by all the post–Early Christian glazed wares, the "Arab geometric" wares, etc., up to about 1800. It is treated as one long and continuous occupation, as the writer does not feel himself competent to deal with these wares in detail. The plain must have been heavily settled during these times with the exception of the upper valley of the ʿAfrīn.

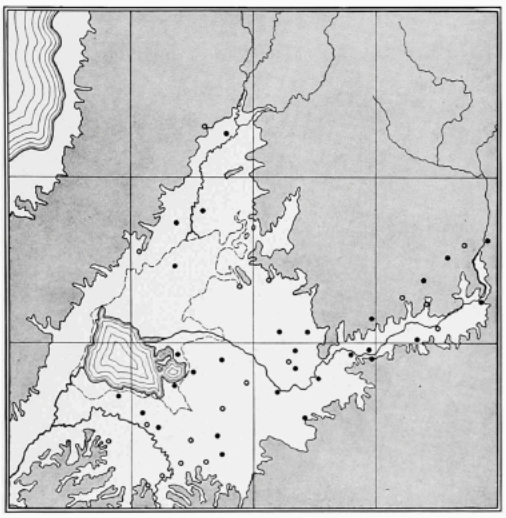
Fig. 9. "Map XII.–Distribution of Medieval Arab Wares."
Robert J. Braidwood, *Mounds in the Plain of Antioch: An Archaeological Survey* (Chicago: The University of Chicago Press, 1937), 45. Courtesy of the Institute for the Study of Ancient Cultures of the University of Chicago.



MAP XV.—DISTRIBUTION OF JUDAIDAH IV WARES

During Period IV, "Syro-Hittite" times, the plain was quite thickly inhabited, especially east and south of the lake and up the ʿAfrīn valley. None of the characteristic wares was found up the Kara Su valley. If we grant that the culture was not indigenous, it would seem from the number of mounds found in the ʿAfrīn valley that the peoples who brought it moved into the plain via the ʿAfrīn.

Fig. 10. "Map XV.–Distribution of Judaidah IV Wares."
Robert J. Braidwood, *Mounds in the Plain of Antioch: An Archaeological Survey* (Chicago: The University of Chicago Press, 1937), 48. Courtesy of the Institute for the Study of Ancient Cultures of the University of Chicago.



MAP XVI.—DISTRIBUTION OF JUDAIDAH V WARES

There seems to have been a fairly heavy occupation of the plain by the Period V people. The culture seems evenly distributed over the area, except west of the lake, and is especially well represented up the ʿAfrîn valley.

Fig. 11. "Map XVI.—Distribution of Judaidah V Wares." Robert J. Braidwood, *Mounds in the Plain of Antioch: An Archaeological Survey* (Chicago: The University of Chicago Press, 1937), 49. Courtesy of the Institute for the Study of Ancient Cultures of the University of Chicago.

Some of the most revealing illustrations in Braidwood's *Survey* (published in 1937) are sixteen successive maps (or rather diagrams) showing the distribution of Judaidah ceramic wares in the region. Each map shows the distribution of ceramic wares in a given period on the Plain of Antioch and in the Amuq Valley. Braidwood applied typological analysis both to the material culture and to the topography of the mounds themselves in order to come up with conclusions about the natural territory and ancient patterns of occupation. For example, he assumed that the inhabitants of this area were "always" engaged in agriculture and that "the most important factor in the distribution of the towns is the arability of the land surrounding them."[60] This allegedly explained the unusual frequency of ancient settlements on non-defensible terrain throughout the fertile alluvial plane.

Braidwood's approach may not appear surprising to an audience familiar with the history of US expeditions in the American West in the second half of the nineteenth century, which combined geological and ethnological surveys. Yet, as archeologist Patty Jo Watson observed in her biographical essay, Braidwood's survey was "unheard of in western Asia at that time, when long-term digs at large individual sites

were the norm."[61] Braidwood's archaeological reconnaissance—surface exploration and limited trenching—substituted the German Orient Institute's and the early Chicago Oriental Institute's practice of hauling away all the strata of an individual site until the bedrock. Archeological reconnaissance was a fitting revision for a new era after 1936, when the Rockefeller Foundation funds that sustained long-term logistical operations in the region were reduced.

In his 1958 introduction to *Excavations in the Plain of Antioch*, which he co-authored with Linda S. Braidwood, Robert Braidwood highlighted what he then understood as the shortcomings of the original survey of 1936:

> Our exasperation with our efforts of twenty years ago extends even to the more familiar categories of "object archaeology." It will be obvious to the reader that our treatment of pottery, for example, is not primarily in terms of vessels which living men and women made to keep something in but rather as something made for archaeologists to catalogue and classify and make painted-motif repertoires of.[62]

In the final analysis, Braidwood's method, which he named "comparative artifactual stratigraphy," coordinated a great number of archaeological sites with vertical archaeological and horizontal territorial sequences.[63] No archaeological site was understood to be singular. Its meaning could be derived from its differences and similarities with other sites in a series—other points of archaeological interest distributed throughout a "naturally" delimited territory. Human flows in ancient times are represented as a series of coordinated sites and artifacts: their distribution, proximity, contiguity, or distance are intended to tell us about the connectivity of an ancient region.

Nuclear Habitat Zones, Village-Farming-Way-of-Life, Population

In 1948, the Oriental Institute of the University of Chicago carried out a trial excavation at the prehistoric site of Jarmo in Iraqi Kurdistan, establishing it as one of the earliest known farming communities. This discovery was a precursor to the Oriental Institute's prehistoric archaeology ("Prehistoric Project") in Iraq. Two full seasons were conducted in 1950–51 and 1954–55 by Robert J. Braidwood, Linda S. Braidwood, and a group of excavators at Jarmo and nearby sites.[64] The Oriental Institute's Jarmo excavations

were interrupted in June 1955 due to political developments in Iraq. The institute's prehistoric expeditions continued in the Kermanshah valley in Iran (1959–60) and Çayönü in Southeastern Turkey in the late 1960s and early 1970s. In 1952, Linda Braidwood described Jarmo as a "village site" with mud-walled houses and a dozen successive levels—habitation debris to a depth of twenty-five feet—on three acres of land, bordering a steep bluff.[65] This site of modest mud houses on the flanks of the Zagros mountains came to recenter the US scientific imagination on the origins of agriculture in Southwestern Asia. Patty Jo Watson, who joined the 1954–55 season, vividly describes the enthusiasm with which Jarmo was received:

> Robert Braidwood's 1950s Iraq-Jarmo Project, and the publications based on it, were so well known that for several decades during the mid-20th century, anthropology students were required to display knowledge about Jarmo and "the hilly flanks of the Fertile Crescent." That phrase was Braidwood's description of the mountain foothill locales where he believed the world's first village farming communities were established—places like Jarmo where wild wheat, barley, and legumes grew and wild goats, sheep, pigs, and cattle roamed. Such sedentary communities, he thought, laid the economic foundations for development of Bronze Age civilization in the Tigris-Euphrates flood plain.[66]

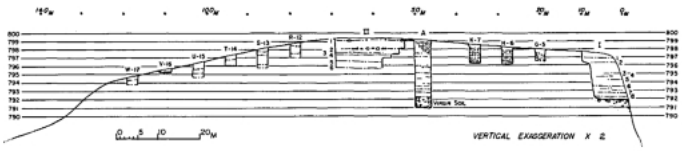


Fig. 12. "Schematic east-west section of the Jarmo, Iraq, (double vertical exaggeration)."
Linda Braidwood et al., *Prehistoric Archaeology Along the Zagros Flanks* (Chicago: University of Chicago, 1983), 167. Courtesy of the Institute for the Study of Ancient Cultures of the University of Chicago.

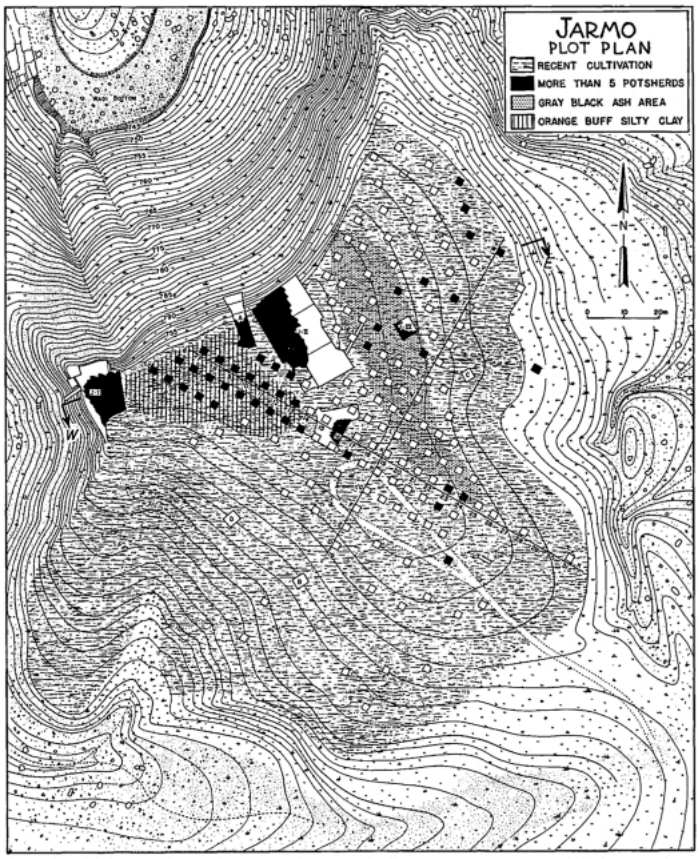


Fig. 13. "Plot plan of the Jarmo site and operations."
Linda Braidwood et al., *Prehistoric Archaeology Along the Zagros Flanks* (Chicago: University of Chicago, 1983), 168.
Courtesy of the Institute for the Study of Ancient Cultures of the University of Chicago.

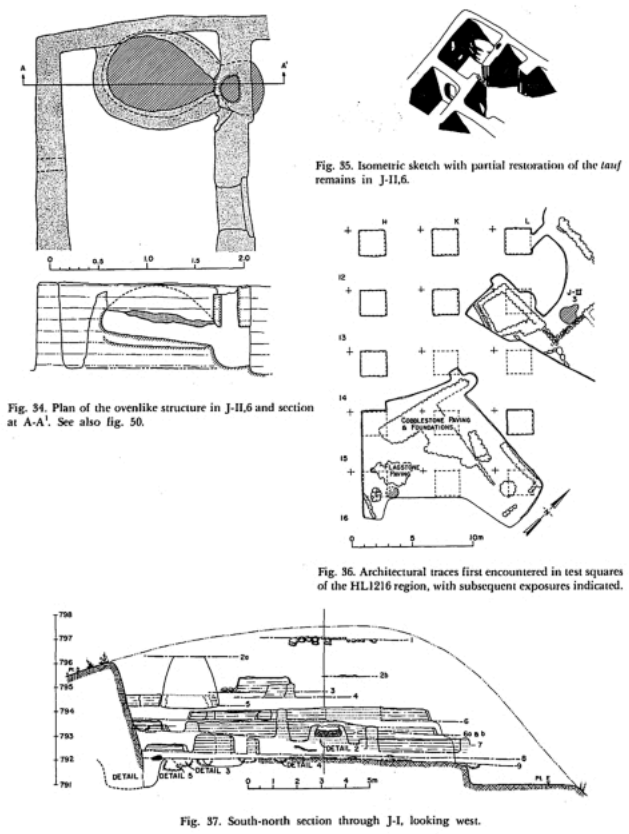


Fig. 14. Drawings and diagrams showing architectural traces encountered in test squares in Jarmo.
Linda Braidwood et al., *Prehistoric Archaeology Along the Zagros Flanks* (Chicago: University of Chicago, 1983), 172. Courtesy of the Institute for the Study of Ancient Cultures of the University of Chicago.

Around the same time, US scholars began to view the Fertile Crescent not merely as a macro-region, but as a series of coordinated sites and habitats, evolving alongside the newfound fascination with the origins of agriculture. Robert and Linda Braidwood spent a good part of the postwar years developing a series of hypotheses about the origins of "effective food production," "incipient agriculture," or alternatively, "incipient cultivation." They were the intellectual force behind the Prehistoric Project of the Oriental Institute of the University of Chicago in Iraq, Iran, and Turkey, just as their writings, attuned to postwar discourses, lent the Fertile Crescent—or rather the catchy formulation, "the hilly flanks of the Fertile Crescent"—its epistemic content. These hypotheses followed a logical sequence and ranged from site-specific to sweeping. Robert and Linda Braidwood argued that the earliest domestication of plants and animals occurred in southwestern Asia on the "hilly flanks" of the Zagros Mountains. This area is further north of the alluvial plains of the Tigris and Euphrates

Rivers, which Breasted had previously identified as the Fertile Crescent.

In the early years of the Prehistoric Project, biological evidence seemed to confirm this hypothesis. For example, Hans Helbaek, a natural scientist from the Danish National Museum, advised the archaeologists to look for "grain impressions… in the clay of the house walls and the clay of the oven floors."[67] A comparison of these impressions with contemporary crops "established that Jarmo farmers were at the very early stage of wheat and barley domestication."[68] Both Linda Braidwood (in 1952) and Robert Braidwood (in 1960) quoted Helbaek's assessment that the earliest domestication of crops for food production might have occurred in this region "because that is the only place where both plants grew wild."[69] In other words, they believed that early domestication occurred in these species' natural habitat.

In advancing this hypothesis, Robert Braidwood and Linda Braidwood rejected the theory of "propinquity" (also known as the "oasis" theory) that catastrophic climate change caused the desiccation of flora and fauna, forcing the surviving species to oases bordering the desert. This earlier theory maintained that the domestication occurred in desert oases where humans and the early domesticates were concentrated.[70] According to Robert Braidwood, the climate hadn't changed significantly on the hilly flanks of the Fertile Crescent since the post-Pleistocene (post-glacial) age. The flora and fauna of the Zagros range could thus be compared to the species present during the initial stage of domestication and during "incipient cultivation."

In a series of publications from 1948 onward, Robert Braidwood called "the hilly flanks" a "nuclear habitat zone" of agriculture or "Nuclear Near East," which he defined as "A region with a natural environment which included a variety of wild plants and animals, both possible and ready for domestication."[71] Thus, although Southwestern Asia chronologically presented the earliest habitat zone, agriculture originated independently in multiple "nuclear" zones. In a review published in *American Anthropologist* in 1949, Linda and Robert Braidwood suggested that the task of prehistoric archaeology was no longer to devise "a world scheme of development," but rather to look for "regularities" in flora, fauna, and material deposits (including architecture/settlement patterns) with an eye on other "nuclear habitat zones" around the world where domestication occurred.[72] The village assemblies that are found in the Fertile Crescent, Central America, the Andes,

and Southeast Asia were homotaxial: the architectural/stratigraphic arrangement of the village assemblages could be expected to be similar across the Near East and the Americas, although they took place independently and millennia apart.

The Prehistoric expeditions of the Oriental Institute in Iraq were directed to identify sites from different phases of the transition from "the terminal stage of food gathering" to incipient agriculture," and, then, to sedentary-farming village communities. The two sites that the Oriental Institute explored during the Iraq expedition—the prehistoric sites of Karim Shahir and Jarmo—exemplified the second (incipient) and third (farming community) stages of this transition. According to Robert and Linda Braidwood, incipient food-production eventually led to the first sedentary "village-farming-way-of-life."[73] These villages engaged in subsistence agriculture—Jarmo was but one example.[74]

According to the Oriental Institute archaeologists in the 1950s, the early domesticates—both crops and animals—were subjected to genetic mutations through a human-induced selection process. The mutant forms of these species were removed from their natural habitat to alluvial plains (in the case of the Fertile Crescent, those of the Tigris, Euphrates, and the Nile Valley). The large-scale cultivation and irrigation sustained larger densities of population, leading to "an urban civilization."[75]

Robert and Linda Braidwood and the Prehistoric Project of the University of Chicago's Oriental Institute thus revised the Fertile Crescent alongside a new theory of "habitat" and the origins of agriculture. Yet theirs was not the only one. The Prehistoric Project of the University of Chicago unfolded at a time when the Australian archaeologist and prehistorian V. Gordon Childe popularized the term "Neolithic Revolution" to describe the origin of agriculture and its consequences.[76] For Childe, a historical materialist, the Neolithic Revolution, as all world historical revolutions, was determined by economic systems. He interpreted the domestication of plants and animals with a strong teleological charge as transition to accumulation and surplus in food supply.

Robert Braidwood rejected the term "Neolithic" in his *Excavations in the Plain of Antioch*: "We have purposefully avoided both such Neo-Grecism as 'Mesolithic,' 'Neolithic,' and 'Chalcolithic' and the metallic 'age' terminologies."[77] In a 1957 article he co-authored with Charles A. Reed in *Cold Spring Harbor Symposia on Quantitative Biology*, Robert

Braidwood addressed the inconsistencies prevalent in the periodization of prehistoric times. The two argued that Grecized chronological subdivisions such as Neolithic ("new stone age") present a "typological-technological" classification. This material chronology, they argued, should be replaced with a classification based on successive subsistence levels and social organization.[78]

In 1953, Robert and Linda Braidwood had proposed three "eras" in the prehistory of Southwestern Asia based on forms of subsistence:

> a) the terminal era of the food-gathering stage,
>
> b) the era of incipient agriculture and animal domestication, and
>
> c) the era of village-farming efficiency.[79]

In the article he co-authored with Charles A. Reed in 1957, Robert Braidwood reframed these forms of subsistence as "phases" (in a developmental sequence) rather than chronological "eras." For if Childe's "Marxist" archaeology offered a teleological system, Braidwood and Reed's subsistence typology did not lead to a single resolution. The "village-farming-way-of life" was a developmental stage leading to "the Western cultural tradition." Yet, having reached the phase of "village-farming efficiency," a plurality of the world's population was not necessarily expected to leave prehistory behind and move to history.

Urging biologists and natural scientists to take an interest in "the history of eco-systems," Braidwood and Reed made a bold move to reclassify "the whole range of developmental levels" of prehistoric peoples and their present-day "survivors" based on their "subsistence patterns."[80] Subsistence was equated with land use and quantified by population concentration per 100 sq. miles. It suffices to quote from a selection of these eight developmental phases:

> (1) The more "natural" food-gathering of full Pleistocene times, with a very low level of population density… Probably, this level of subsistence has no present-day survivors, but the south African Bushmen or the Australian aborigines of contact times might be suggestive. Population concentration estimate: 3.0 per 100 sq. miles.[81]
>
> (2) The more specialized food-collecting (or terminal-food gathering) of late glacial and early post-glacial times… A classic case of high specialization in the

> anthropological literature would be that of salmon fishermen of British Columbia… Population concentration estimate: 12.5 per 100 sq. miles.[82]
>
> (5) The primary village-farming community, settled and architecturally well expressed on the basis of reasonably efficient level of food-production and plus some specialized food collection… Population concentration estimate: 2,500 per 100 sq. miles.[83]

By "efficient food production," the authors meant economies where "food acquired through direct production amounts to an approximate half of the community's dietary needs… [and] both the plant and animal domesticates are no longer strictly bound to their natural wild biome and habitat."[84]

Braidwood and Reed were interested in quantifying the correlation between subsistence economies and settlement patterns—and Jarmo was once more the test case:

> How many people to a house? The best we can say is that each house certainly appears to be a separate family unit, comparable in size to a Kurdish village house of the same area today. The Jarmo houses had perhaps a few smaller and more numerous rooms, but the detailed inner arrangements of a Kurdish home, we must confess, are only vaguely known to us. Actually the house-size, the mode of house construction, and the pattern of house distribution are so remarkably similar to those of the adjacent Kurdish villages of today that we feel we can compare them directly with a degree of validity.[85]

Indeed, the Oriental Institute archaeologists were not equipped to conduct a cultural analysis of the neighboring Kurdish villages, not least because of the language barrier. Yet they were convinced that they could read structural regularities of subsistence that must exist between a village, the surrounding farmland, and the natural territory. The peculiarities of the organization, distribution, and construction of homes—the architecture of the village—took a back seat in this article to the economies of cultivable land and means of subsistence. "There must, for each topographic and environmental region, be an optimum relationship between size of village and area of farmland."[86]

Using the 1947 Census for Iraq, the authors calculated that the average population of a village in the Nahiya of Chemchemal Center (smallest administrative division where Jarmo is located) was 158 (there were sixty-four villages).

This average population of a Kurdish village was nearly identical to the population the Chicago researchers had projected for prehistoric Jarmo: 150 inhabitants. When they also figured the average land area that a village occupies and farms, and the frequency and distribution of villages in the territory, the authors calculated that each contemporary villager was sustained by 22.8 acres of land. Other nahiyas in the region revealed similar numbers. The "population density of village-farmers" per one hundred square miles was 2,737, which fit the correct population concentration in the prehistoric taxonomy that Braidwood and Reed provided:[87]

> If our data are even roughly valid, the somewhat tentative conclusion which we cautiously offer is that, for the Zagros foothills with which we are dealing, there has been no great population change during the last 7000 years. Once established and having reached a certain degree of efficiency, village-farming life would seem to have gone with little basic change through all the turmoils of military and religious upheavals.[88]

What Braidwood and Reed outlined here is not a reading of the political economy of the Iraqi Kurdistan, but one that subsumes the territory into biopolitics. They see subsistence patterns not only as a point of prehistoric origins and classification, but also as the controlling factor of life. The farming-village is the vitalistic embodiment of the natural and efficient way of occupying the land—a way of life. All technological, political, religious, or historical developments in the region must, by this logic, conform to a pattern of subsistence.[89]

Postwar research on the origins of food production was conversant with a larger turn to biopolitics. The archaeological discourse on prehistory shared some vocabularies with regional development and international technical assistance, including subsistence, habitat, food-production, efficiency, and population. The Rockefeller Foundation's (the principal benefactor of the Oriental Institute two decades earlier) agricultural assistance to developing nations known as the Green Revolution, starting with Mexico and India in the 1940s and 1950s, followed a path that, according to Chicago anthropologists, had begun in prehistory on the hilly flanks of the Fertile Crescent.[90]

In the final analysis, Robert and Linda Braidwood's redefinition of the Fertile Crescent complemented a Cold

War realignment in the discourses of international development. This shift is evident in the changing vocabularies of prehistoric research. For example, the archaeologists looked for the origins of "effective food production" (in lieu of agriculture) and "nuclear habitat zones" (in lieu of oases). Likewise, the idyllic "village-farming-way-of-life" was preferable to a menacingly collectivizing "Neolithic Revolution." This may partly explain the attention that the Jarmo village garnered in the United States during the Cold War.

A Fossil Discourse

The theory that linked the Fertile Crescent with the origins of agriculture unraveled in the following decades, paradoxically at the very moment when prehistoric research was institutionalized as a branch of anthropology and archaeology.

Robert Braidwood and Halet Çambel formed a joint Istanbul-Chicago Universities' Prehistoric Research in Southeastern Anatolia in 1962 at the Prehistory Congress in Rome. Çambel had been recognized internationally for her excavations at Karatepe-Aslantaş near Osmaniye, Turkey, and for her *in situ* preservation and display of ancient monuments, which led to the creation of one of Turkey's first national parks.[91]

The political realignment of the Cold War made American-Turkish collaboration possible at an institutional level. Turkey joined NATO in 1952. Çambel and Braidwood credited İsmet İnönü, Prime Minister in 1962-1963, when the joint project started, for his "keen interest in and understanding of [the] research problem and his staunch support."[92] Funding for the Joint Prehistoric Project came from a grant from the National Science Foundation, from universities that supported their academic staff—especially the Oriental Institute and the Department of Anthropology of the University of Chicago, and from the Faculty of Letters at Istanbul University, to which Çambel belonged. Linda Braidwood was also awarded a Fulbright Research Grant. The Ford Foundation training grant covered the travel and field expenses of participating American students.[93]

The first American field archaeologists joined their Turkish counterparts in Istanbul in September 1963. Appointed Visiting Professor, Robert Braidwood lectured at Istanbul University in 1963-1964. The first field survey took place in October 1963 in the Southeastern province of Siirt. The field

campaigns in 1964, 1968, 1970, and 1972 were followed by a period of analysis of the archaeological "yields" at the Prehistory Laboratory of the University of Istanbul.[94] This was a practical solution that abided by Turkish antiquities law forbidding the transport of archeological materials out of the country and also helped build capacity for Istanbul University's new prehistory section.

The archaeological reconnaissance missions in 1963-1964 identified and surveyed a very large number of prehistoric sites. The decision to select Çayönü Tepesi near Ergani, Diyarbakır, for excavations had to do with its proximity to "the fine logistics facilities of the Dicle Teachers' School."[95] A long list of governors from surveyed provinces and the directors of the Teachers' School in Ergani are acknowledged in the Joint Prehistoric Project volume. One name stands out: the joint team had a short excursion to the Urfa Province to check on two sites of archaeological interest reported to them by oil geologist Walter W. Higgins, during which Mobil Exploration Mediterranean, Inc. provided logistical support.[96]

Fig. 15. Istanbul–Chicago Universities Joint Prehistoric Project, Çayönü, Turkey. General aerial view of the archaeological site. Neg. No: ÇT 85 – 33/57, Box 003, Location 1032.1 (CT85-33.57), Papers of Robert J. and Linda S. Braidwood. Courtesy of the Institute for the Study of Ancient Cultures of the University of Chicago.

Fig. 16. Istanbul–Chicago Universities Joint Prehistoric Project, Çayönü, Turkey. "16N with Circular Structure BU in the center and Building BR on the right and BV on top. General View from S/SE."
Neg. No: ÇT 85 – 34/5, Box 003, Location 1032.1 (CT85-34.5), Papers of Robert J. and Linda S. Braidwood. Courtesy of the Institute for the Study of Ancient Cultures of the University of Chicago.

The archaeological campaigns at Çayönü from spring 1964 onward complicated, if not challenged, the Chicago Oriental Institute archaeologists' theses that assumed a correlation between agriculture (domestication of plants and animals) and the architectural/cultural achievements of a society. During the 1978-1979 season, a group of architectural history researchers from Karlsruhe University joined the Chicago Oriental Institute and the Prehistory Section of Istanbul University. In Çayönü, the unusually regular and sophisticated architectural structures found in a prehistoric cluster did not seem correlated to the finding that the groups that built it were "on the very threshold of effective food production." Robert Braidwood, Halet Çambel, and Wulf

Schirmer observe that a building type with complex design and construction was found in the prehistoric substrata, to be replaced later on the same site by a completely new building of the same plan.[97] Then, for unknown reasons, building plans and techniques changed, and the newer techniques were not necessarily more advanced than those found in older strata. Continuity and change in prehistoric architecture did not confirm the theory of transition to "efficient food-production" of Chicago's agriculture-centric researchers.

The floral and botanical evidence from Çayönü suggested that the evolution of agriculture was *not* monophyletic (the theory that once a plant was domesticated in a society, all future cultivators of the plant derived from that event) and that a crop might have been domesticated multiple times and in different places. Perhaps there was no one threshold between food gathering and food production at all. Prehistoric culture groups had their cereals and continued hunting and gathering without going through a "threshold of effective food production."

In 1981, after fieldwork in Çayönü, Braidwood, Çambel, and Schirmer write:

> The more that exposures on a site are enlarged and deepened, the more that earlier suggestions and interpretations must be revised. This is unfortunate because the earlier suggestions have already passed on into secondary literature where they have become uneradicable fossils.[98]

The words "Fertile Crescent" are missing from this 1981 article. In the late 1960s and the 1970s, the Oriental Institute's hypotheses about the origins of food production in the Fertile Crescent had to be tempered. Robert and Linda Braidwood were among the first to admit when new evidence did not confirm the theory that had sent American archaeologists to the Taurus-Zagros hill country in the first place.[99] They had completed two excavation seasons at Çayönü when they wrote in 1969: "any distinction between a level of intensified food collecting and of incipient plant and animal domestication may be more a matter of semantics than of reality."[100] From the biological "evidence" of Jarmo to the "semantics" of Çayönü, the theory of the origins of agriculture came a long way, substituting the empiricism of linear civilizational development for a sense of multiple, nonlinear, and contingent historicity.

In lieu of Conclusion

It would be too simple to conclude that the Fertile Crescent exists because Americans invented it. The Fertile Crescent exists because the archaeological discourse that has constructed it since 1919 has offered a sequence of "inevitable" connections between climate and subsistence, civilization and agriculture, and land and labor, as well as an opposition between "sedentary agriculturalists" and "wandering nomads"—those who possess the land, and those who are locked out of it.

Once its scientific usefulness concluded, the Fertile Crescent —a fossil discourse—continued to describe climates, agricultures, and populations well beyond the geography to which it had initially referred. The term has even been applied to the American South.[101] In its original location (even when it is no longer called the Fertile Crescent), the discourse has been fraught with operative regionalism where dreams of changing the climate, taming rivers, conquering the desert, and making arid landscapes "fertile" propel massive regional infrastructure projects. Turkey's Southeastern Anatolia Project (G.A.P.), an "integrated regional development project" planned in the 1970s—massive dams, hydroelectric and irrigation infrastructure using the waters of the Euphrates and the Tigris—is the largest, though not the only one.[102]

Today, the Fertile Crescent survives as a "fossil" in the discourses of development and policy experts and in the "critical" interventions of public intellectuals when it is convenient to refer to a region by a "natural" geography, agricultural capacity, an extractive zone, or the location of climate-induced conflict.[103] It stands in for an idea of interconnected "natural" and logistical spaces always on the verge of a civilizational leap forward.

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Can Bilsel, "Inventing the Fertile Crescent: The Chicago Oriental Institute, Prehistory, Biopolitics, and the Making of a Region," *Aggregate* 14 (April 2026), https://doi.org/10.53965/QWPQ3664.

1 Sabrina Tavernise, "A Climate Warning From the Fertile Crescent," May 6, 2025, in *The Daily*, produced by *The New York Times*, https://www.nytimes.com/2025/05/06/podcasts/the-daily/climate-change-iraq-middle-east.html . ↑

2 The archaeologists affiliated with the University of Chicago's Oriental Institute were marching in the footsteps of the German Oriental Institute in Iraq (1899–1918), as I shall discuss in due order. ↑

3 For a critical discussion of the "Middle East" and its discursive constructions in the Cold War, see: Seçil Binboğa, "Fluid Frontiers," *Aggregate* 14 (April 2026). ↑

4 Ayala Levin and Manuel Shvartzberg Carrió, the Society of Architectural Historians, Pittsburgh, PA, April 29, 2022. ↑

5 William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York: W. W. Norton & Company, 1991). See also: Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (New York: Pantheon Books, 1985) for more on John Wesley Powell's formation of "natural" watershed districts in the American West—and his skepticism of large-scale irrigation as a concentration of power that may endanger America's "democratic" settler-colonial ethos. ↑

6 For the cultural imaginings of empire, settlement, and extraction in the American Southwest and the Middle East, and the commodification of "desert" as a resource, see: Natalie Koch, *Arid Empire: The Entangled Fates of Arizona and Arabia* (New York: Verso, 2023). ↑

7 See: Jeffrey Abt, *American Egyptologist: The Life of James Henry Breasted and the Creation of His Oriental Institute* (Chicago: University of Chicago Press, 2011). ↑

8 James Henry Breasted, *The Oriental Institute, The University of Chicago Survey*, vol. XII (Chicago: The University of Chicago Press, 1933), 3. ↑

9 Thomas Scheffler, "'Fertile Crescent', 'Orient', 'Middle East': The Changing Mental Maps of Southwest Asia," *European Review of History* 10, no.2 (June 2003): 253–72. Scheffler contextualizes Breasted within the European imperial geography of the turn of the twentieth century. ↑

10 See, in this volume: Seçil Binboğa, "Fluid Frontiers." ↑

11 For a review of ideas, up to 1971, about the origins of agriculture in the region with an emphasis on the University of Chicago scientists' contributions, see: Gary A. Wright,

"Origins of Food Production in Southwestern Asia: A Survey of Ideas," *Current Anthropology* 12, no. 4–5 (October–December 1971): 447–77. See also: Kent V. Flannery, "The Ecology of Early Food Production in Mesopotamia," *Science* 147, no. 3663 (March 12, 1965): 1247–56 and Joy McCorriston and Frank Hole, "The Ecology of Seasonal Stress and the Origins of Agriculture in the Near East," *American Anthropologist* 93, no. 1 (March 1991): 46–69. ↑

12 For more on the British air control regime during the colonization of Iraq, see: Priya Satia "'A Rebellion of Technology': Development, Policing, and the British Arabian Imaginary" in *Environmental Imaginaries of the Middle East and North Africa,* ed. Diana K. Davis and Edmund Burke III (Athens, Ohio: Ohio University Press, 2011), 23–59. ↑

13 For more on the Rockefeller Foundation's funding of the Oriental Institute, see: Abt, *American Egyptologist,* 217–18. See also: Jeffrey Abt, "Crafting an Institution, Reshaping a Discipline: Intellectual Biography, the Archive and Philanthropic Culture" in *Life Writing in the History of Archaeology,* ed. Clare Lewis, Gabriel Moshenska (London: UCL Press, 2023), 91–118. For "scientific philanthropy," see: Barry D. Karl and Stanley N. Katz, "Donors, Trustees, Staffs: An Historical View, 1890–1930," in *The Art of Giving: Four Views on American Philanthropy* (New York: Rockefeller Archive Center, 1979), 3–13 and Robert F. Arnove, ed., *Philanthropy and Cultural Imperialism: The Foundations at Home and Abroad* (Boston: G. K. Hall & Co., 1980). ↑

14 Thorkild Jacobsen and John A. Wilson "The Oriental Institute: Thirty Years and the Present," Journal of Near Eastern Studies 8, no. 3 (July 1949): 238. ↑

15 Lindsay J. Ambridge, "Imperialism and Racial Geography in James Henry Breasted's Ancient Times: A History of the Early World," *Journal of Egyptian History* 5, no. 1–2 (2012): 12–33. ↑

16 James Henry Breasted, *Ancient Times, A History of the Early World: An Introduction to the Study of Ancient History and the Career of Early Man* (Boston: Ginn and Company, 1916), 100. ↑

17 Breasted, *Ancient Times*, 101. ↑

18 See, for example: Edmond Demolins, *Comment la route crée le type social* (Paris: Firmin-Didot, 1901). ↑

19 Breasted, *Ancient Times*, 101–102. ↑

20 Breasted, *Ancient Times*, 101–102. ↑

21 Lindsay J. Ambridge, "History and Narrative in a Changing Society: James Henry Breasted and the Writing of Ancient Egyptian History in Early Twentieth Century America," (PhD Dissertation, University of Michigan, 2010), 128–30. See also: Ambridge, "Imperialism and Racial Geography," 12–33. ↑

22 James Henry Breasted, "The Bridgehead of Asia Minor" in *The Nation* (June 1918), 676. ↑

23 Breasted, "The Bridgehead of Asia Minor," 677. ↑

24 James Henry Breasted, "The Oriental Institute of the University of Chicago: A Beginning and a Program," *The American Journal of Semitic Languages and Literatures* 38, no. 4 (July 1922): 235. ↑

25 Breasted, "The Oriental Institute of the University of Chicago," 235. ↑

26 Breasted, "A Beginning and a Program," 270. See also: "On train, between Haifa and Jerusalem, Palestine; June 3, 1920" in *Letters from James Henry Breasted to His Family August 1919–July 1920: Letters Home during the Oriental Institute's First Expedition to the Middle East*, ed. John A. Larson (Chicago: The Oriental Institute of Chicago, 2010), 259. ↑

27 Breasted, *Ancient Times*, 101. See also: Breasted, *The Oriental Institute*, 78 and J. H. Breasted, *The Conquest of Civilization* (New York: Harper & Brothers, 1926), 117–18. ↑

28 Breasted, "A Beginning and a Program," 263. ↑

29 D.D. Luckenbill, "Akkadian Origins," *The American Journal of Semitic Languages and Literatures* 40, no. 1 (October 1923): 5. ↑

30 Albert T. Clay, the Yale Assyriologist who was skeptical of Breasted's theory of the Fertile Crescent, conducted an expedition from Baghdad in 1923 to "study the agricultural possibilities of Syria and Mesopotamia, especially of the Euphrates Valley." Albert T. Clay, "The So-Called Fertile Crescent and Desert Bay," *Journal of the American Oriental Society* 44, (January 1924): 186–201. ↑

31 See: Michael Provence, *The Great Syrian Revolt and the Rise of Arab Nationalism* (Austin: University of Texas Press, 2005), 13–14. Provence observes that "French mandate authorities failed to comprehend the significance of the relationships and the connections among regions, classes, and sectarian groups in Syria. They sought to divide and govern mandate Syria along a series of supposedly timeless sectarian and geographical divisions." ↑

32 In 1879, the US Congress merged the competing surveys of the American West into the US Geological Survey (USGS) and directed the creation of the Bureau of Ethnology (BE) to continue fieldwork on the classification of the American Indian tribes. John Wesley Powell was appointed director of both the USGS and the BE. See: Richard B. Woodbury and Nathalie F. S. Woodbury, "The Rise and Fall of the Bureau of American Ethnology," *Journal of the Southwest* 41, no. 3 (September 1999): 284. ↑

33 James Henry Breasted, "The Place of the Near Orient in the Career of Man and the Task of the American Orientalist," *Journal of the American Occidental Society* 39 (January 1919): 161. See also: Clark Wissler, *The American Indian: An Introduction to the Anthropology of the New World* (New York: Douglas McMurtrie, 1917) and Abt, *American Egyptologist*, 222, 441. ↑

34 John Wesley Powell, *Indian Linguistic Families in America North of Mexico* (Washington, D.C.: Bureau of [American] Ethnology, 1891). ↑

35 Worster, *Rivers of Empire*, 141, 111–25. ↑

36 I am grateful to Manuel Shvartzberg Carrió for comments on an earlier draft of this paper. ↑

37 See: Scheffler, "The Changing Mental Maps of Southwest Asia," 256, 266–67 for an overview of the Fertile Crescent as made manifest in the territorial nationalisms of Greater Syria, including the movement led by the Lebanese politician and thinker Antun Saadeh in the 1940s. Scheffler's interpretation of this movement as "Foreign ideas, adopted by local 'natives' who know how to use them to their own advantage" adheres to a theory of "cultural diffusion" to which Breasted, too, subscribed. ↑

38 Reinhold Martin*, Knowledge* *Worlds: Media, Materiality, and the Making of the Modern University* (New York: Columbia University Press, 2021), x. ↑

39 Gilles Deleuze, "Postscript on Societies of Control," *October* 59 (Winter 1992): 4. I borrow the mesh and sieve metaphors from Deleuze without, however, suggesting a transition from "disciplinary" to "control" society. ↑

40 Breasted, *The Oriental Institute*, 127–28. ↑

41 Breasted, *The Oriental Institute*, 66–67. ↑

42 The Sanjak of Alexandretta/Iskenderun, then in French-administered Syria; since 1939, Hatay, Turkey. ↑

43 Breasted, *The Oriental Institute*, 89–90. ↑

44 Breasted, "A Beginning and a Program," 274–75. ↑

45 For a history of the excavations of the German-Orient Society (DOG), see: *Zwischen Tigris und Nil: 100 Jahre Ausgrabungen der Deutschen Orient-Gesellschaft in Vorderasien und Ägypten,* ed. Gernot Wilhelm (Mainz: Philip von Zabern, 1998). For a history of German archaeology in the Middle East, see: Suzanne Marchand, *Down from Olympus: Archaeology and Philhellenism in Germany, 1750–1970* (Princeton: Princeton University Press, 1996) and Can Bilsel, *Antiquity on Display: Regimes of the Authentic in*

Berlin's Pergamon Museum (Oxford: Oxford University Press, 2012). ↑

46 Breasted visited Assur during the University of Chicago's archaeological reconnaissance expedition of 1920. His impressions of the German field operations in Assur underline how long-term logistical infrastructure is required to match German scientific achievements. See: Breasted's letter from Mosul (Iraq), April 14, 1920, in *Letters* (2010), 200. ↑

47 See: Eric H. Cline, *Digging Up Armageddon: The Search for the Lost City of Solomon* (Princeton: Princeton University Press, 2020). ↑

48 *The Human Adventure* (1934; Oriental Institute of the University of Chicago), https://www.youtube.com/watch?v=yysHJk0v5XA. ↑

49 See: Lucia Allais, *Designs of Destruction: The Making of Monuments in the Twentieth Century,* (Chicago: The University of Chicago Press, 2018), 172. Allais refers to the emergence of the field of cultural conservation, the networks of international cooperation in the 1960s and 1970s, and how UNESCO "augmented… techniques that promised control over materiality" in the postcolony as the "material turn." ↑

50 Jeffrey Abt, "Toward a Historian's Laboratory: The Breasted-Rockefeller Museum Projects in Egypt, Palestine, and America," *Journal of the American Research Center in Egypt*, 1996 33 (1996): 173–94. ↑

51 Abt, "Toward a Historian's Laboratory," 173–94. ↑

52 Jacobsen and Wilson, "The Oriental Institute," 236. ↑

53 Jacobsen and Wilson, "The Oriental Institute," 236. ↑

54 Jacobsen and Wilson, "The Oriental Institute," 239. ↑

55 Robert J. Braidwood, *Mounds in the Plain of Antioch: A Survey* (Chicago: The University of Chicago Press, 1937), 4. ↑

56 Braidwood, *Mounds in the Plain of Antioch*, 7. ↑

57 Braidwood, *Mounds in the Plain of Antioch,* 1. ↑

58 Braidwood, *Mounds in the Plain of Antioch,* 2. ↑

59 Braidwood, *Mounds in the Plain of Antioch,* 4, 20. ↑

60 Braidwood, *Mounds in the Plain of Antioch,* 38. ↑

61 Patty Jo Watson, "Robert John Braidwood (1907–2003)," *American Anthropologist* 106, no. 3 (September 2004): 642. ↑

62 Robert J. Braidwood and Linda S. Braidwood, *Excavations in the Plain of Antioch I: The Earlier Assemblages, Phases A-J* (Chicago: The University of Chicago, 1960), 498. ↑

63 Braidwood and Braidwood, *Excavations in the Plain of Antioch I*, 498. ↑

64 Linda S. Braidwood et al., *Prehistoric Archaeology Along the Zagros Flanks* (Chicago: University of Chicago, 1983), vii–viii. ↑

65 Linda S. Braidwood, "Early Food Producers: Excavations in Iraqi Kurdistan," *Archaeology* 5, no. 3 (September 1952): 157–64. ↑

66 Watson, "Robert John Braidwood," 642. ↑

67 Hans Helbaek cited in Linda S. Braidwood, "Early Food Producers," 163. ↑

68 Linda S. Braidwood, "Early Food Producers," 163. ↑

69 Linda S. Braidwood, "Early Food Producers," 163; Robert J. Braidwood, "The Agricultural Revolution," *Scientific American* 203, no. 3 (September 1960), 144. ↑

70 Gary Wright, "Origins of Food Production," 114. ↑

71 Robert J. Braidwood, *Prehistoric Men* (Chicago: Chicago Natural History Museum, 1963), 106–107. ↑

72 Linda Braidwood and Robert J. Braidwood, "On the Treatment of the Prehistoric Near Eastern Materials in Steward's 'Cultural Causality and Law,'" *American Anthropologist* 51, no. 4 (October 1949): 665. ↑

73 See: Linda Braidwood, "Early Food Producers," and Robert J. Braidwood, "The Agricultural Revolution." ↑

74 See: Linda Braidwood, "Early Food Producers," and Braidwood and Braidwood, *Excavations in the Plain of Antioch I*. ↑

75 Robert Braidwood, "The Agricultural Revolution," 144. ↑

76 V. Gordon Childe, *New Light on the Most Ancient East*, 4th. ed. (London: Routledge & Kegan Paul, 1952). For an analysis of the development of Childe's theses, see: Gary Wright, "Origins of Food Production." ↑

77 Braidwood and Braidwood, *Excavations in the Plain of Antioch I*, viii. ↑

78 Robert J. Braidwood and Charles A. Reed, "The Achievement and Early Consequences of Food-Production: A Consideration of the Archaeological and Natural-Historical Evidence," Cold Spring Harbor Symposia on Quantitative Biology 22 (January 1957): 20. ↑

79 Braidwood and Reed, "The Achievement and Early Consequences," 21. ↑

80 Braidwood and Reed, "The Achievement and Early Consequences," 19. ↑

81 Braidwood and Reed, "The Achievement and Early Consequences," 21. ↑

82 Braidwood and Reed, "The Achievement and Early Consequences," 21. ↑

83 Braidwood and Reed, "The Achievement and Early Consequences," 22. ↑

84 Braidwood and Reed, "The Achievement and Early Consequences," 22. ↑

85 Braidwood and Reed, "The Achievement and Early Consequences," 26. ↑

86 Braidwood and Reed, "The Achievement and Early Consequences," 26. ↑

87 Braidwood and Reed, "The Achievement and Early Consequences," 26. ↑

88 Braidwood and Reed, "The Achievement and Early Consequences," 27. ↑

89 See: Roberto Esposito, "The Enigma of Biopolitics" in *Biopolitics: A Reader*, ed. Timothy Campbell and Adam Sitze (Durham, NC: Duke University Press, 2013), 359. ↑

90 As historian of science John H. Perkins has shown, the Rockefeller Foundation played a key role in the "development of technologies and social practices that enabled farmers in the Third World to increase their yield dramatically." See: Perkins, "The Rockefeller Foundation and the Green Revolution, 1941–1956," *Agriculture and Human Values* 7, no. 3/4 (June 1990): 6–18. ↑

91 For the in-situ preservation/display in the "late Hittite" site of Karatepe- Aslantaş, led by Halet Çambel, see: Halet Çambel, "Karatepe Restorasyon Çalışmaları (1952–1953)," *Türk Arkeoloji Dergisi* 6, no. 2 (1956): 23–33.; Halet Çambel and Aslı Özyar, *Karatepe-Aslantaş Azatiwataya: die Bildwerke* (Mainz am Rhein: Philipp von Zabern, 2003). ↑

92 Halet Çambel and Robert J. Braidwood, "Comprehensive View: The Work to date 1963–1972," in *The Joint Istanbul-Chicago Universities Research in Southeastern Anatolia*, ed. Halet Çambel, vol. 1 (Istanbul: Edebiyat Fakültesi Yayınları, 1980), 37–38. ↑

93 Çambel and Braidwood, "Comprehensive View," 37–38. ↑

94 Çambel and Braidwood, "Comprehensive View," 37–38. ↑

95 Çambel and Braidwood, "Comprehensive View," 40. ↑

96 Çambel and Braidwood, “Comprehensive View,” 152. ↑

97 Robert J. Braidwood, Halet Çambel, and Wulf Schirmer, “Beginnings of Village-Farming Communities in Southeastern Turkey: Çayönü Tepesi, 1978 and 1979,” *Journal of Field Archaeology* 8, no. 3 (Autumn, 1981): 249–258. ↑

98 Braidwood, Çambel, and Schirmer, “Beginnings of Village-Farming Communities in Southeastern Turkey,” 249. ↑

99 See: Linda Braidwood et al., *Prehistoric Archaeology*, 7–8. Braidwood acknowledged that “villages without food production existed in the Near East.” See also: Willem van Zeist and H. E. Wright, Jr., “Preliminary Pollen Studies at Lake Zeribar, Zagros Mountains, Southwestern Iran,” *Science* 140, no. 3562 (April 1963): 65–67. Van Zeist and Wright’s study began to show palynological evidence suggesting that the flora and climate on the flanks of the Zagros mountains in Iran might have been significantly different 10,000 years ago. ↑

100 Linda S. Braidwood and Robert J. Braidwood, “Current Thoughts on the Beginnings of Food Production in Southwestern Asia,” *Mélanges de l’Université de Saint-Joseph* 45, no. 1 (1969): 147–55. Cited in Linda Braidwood et al., *Prehistoric Archaeology, 7*. ↑

101 Loyd S. Swenson, “The Fertile Crescent: The South’s Role in the National Space Program,” *Southwestern Historical Quarterly* 71, no. 3 (January 1968): 377–92. ↑

102 G.A.P. is the Turkish acronym for the Southeastern Anatolia Project. The historic town of Hasankeyf was submerged by the Ilısu Dam in 2020 after a selection of monuments, and the city was moved to a new location. ↑

103 For example, see: Eyal Weizman and Fazal Sheikh, *The Conflict Shoreline: Colonization as Climate Change in the Negev Desert* (Göttingen: Steidl, 2015). ↑