

Standing on the Shoulders of Giants: Robert McCormick Adams and the World's First Cities

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Abstract

*This article is an obituary to Robert McCormick Adams, the great archaeologist. His study, *The Evolution of Urban Society*, was a path breaker on Mesopotamian archaeology. He discussed the historical processes behind the transitions to urban life and class stratification in which technology and “surplus” played significant roles. Adams was a great inspiration for later generation of archeologists researching on Mesopotamia.*

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Robert McCormick Adams died, in his late 90s, on 27 January 2018. He was the author of *The Evolution of Urban Society* (1966) which is on the reading lists of history courses of several universities, even those that do not have Mesopotamian or Mexican archaeology in their curricula. What is so important about this book? ¹

A specialist on Mesopotamian archaeology, in *The Evolution of Urban Society* Adams discusses the development of its first cities and states (the earliest in the world) in a controlled comparison with urban development in central (highland) Mexico, which had no historical connection with early Iraq. The point was to find structural similarities between the historical processes of two separate societies that had made similar transitions to urban life and class stratification (to form pristine states). In other words the aim was to delineate “independently occurring” “cause-and-effect regularities” (p. 20). It was desired to find those laws of socio-cultural development that were valid cross-culturally. And in this, *Evolution* was a path breaker. There were unique aspects of these two civilizations, as well as recurrent aspects. Quoting Julian Steward, Adams writes (p.37), “anthropology explicitly recognizes that a legitimate and ultimate objective is to see through the differences of cultures to the similarities....” Somewhat paradoxically, however, the validity of Adams’ controlled comparison recognized, it is southern Mesopotamia on which this book is considered authoritative, as certain later discoveries cast doubt on some part of the discussion on Mexico. However, the comparative approach stands vindicated.

Amongst the old world river valley civilizations, Mesopotamia is unique not only in the richness of its archaeological and written sources, but also in its exceptional agricultural productivity, with which aspect I shall begin. Because academic work draws on previously formulated ideas and theories (hence the title of my piece), I first refer to what V. Gordon Childe had to say on agricultural prosperity, in ‘The Urban Revolution’, in *Town Planning Review* (21.1, 1950:3-17), and ‘The Bronze Age’, in *Past and Present* (12, 1957: 2-15), the latter published posthumously. Adams does not seem to be aware of the second of these papers, but refers (1966:10–12) to the first somewhat dismissively.

For Childe, in general, an upsurge in the carrying capacity of land led to an increase in population density. Food producers harvested more food than was necessary for their own consumption, he said, in the first of these papers (Childe 1950: 6), although in his posthumous piece he corrected himself to say (1957:6), “peasants would have been disinclined to produce regularly more than was needed to support themselves and their dependents; to obtain a surplus regularly some inducement or pressure would be needed.” Thus surplus production is not an independent variable. Attributing this to Childe was quite unnecessary. Adams’ held (1966: 45) that the production of plenty could not itself “engender the ideologies and institutional contexts required to mobilise that surplus”; and that there could not have been an inherent tendency to maximize grain production. More important is his observation that the costs of grain transportation (for subsequent reallocation) should count, as also the production of milk, meat, fish, dates and other food, in the case of southern Mesopotamia. Ultimately, it was the thousands of cuneiform ration lists, worked on by I. J. Gelb, recording the amounts of grain disbursed to individuals, that speak of the importance of “surplus” (Ibid:50).

It is interesting to trace scholarly views since the 1960s on the part played by high subsistence productivity in the emergence of densely inhabited cities and surplus extracting elites. In *Heartland of Cities* Adams went on to ask how and why Iraq is now desolate whereas it was once the “heartland of the oldest urban, literate civilization in the world”. There was a “precocious” early development of social and economic institutions, but centuries later, after say, 1100 AD, there was a “catastrophic decline and outright abandonment”. The answer could lie, partly, in diminishing natural fertility—especially the rising salinity of the soil—and also in human action, namely the irrigation of the fields by canals. Irrigation in southern Mesopotamia did not necessitate huge dams and canals but instead local earthworks, which village communities could dig and maintain on their own. So there was no question of a managerial class emerging as the rulers of urban centres.

With markedly seasonal rainfall, the root zone of crop plants could be adversely affected if fields² were not left fallow every alternate year,

to recoup under certain useful weeds so that the level of the ground water fell, and also to receive the fertilizing manure of goats and sheep grazing on weeds and stubble. Irrigation by inundation canal however had a potentially destabilizing effect on the ecology (1966: 53-56). Potential conflict between villages of a tribe or confederation of tribes lay in the fact that the upstream users of canals may have required irrigation water at times and in amounts that conflicted with the needs of those whose fields lay downstream (69-70, 130).³

As regards agricultural potential, Henry Wright found that in the south with alternate-year follows, 6 ha of land could suffice a family, half the land lying fallow each year, the other half producing 450 kg barley (1969:13-14, 21). Wright also notes, importantly, that in Iraq it is the harvest season that requires the greatest labour on the fields (a hectare requires two man-days of labour) so that it is the harvest that laid the limits on the area sown—a “single laborer can cultivate and harvest up to 6.0 hectares.” (Ibid:22). These are impressive figures for productivity.

Even so, as the site surveys reported in Heartland showed, Uruk (Warka), the premier city of Sumer, grew enormously in size perhaps partly due to settlement shifts from the Nippur and Adab region to the north and partly due to the sedentarization of mobile sheep, goat, and cattle herders. Some degree of coercion may also lie behind this population aggregation within the shelter of a city wall. Adams had (1966: 59) referred to “prolonged and bitter intercommunity struggles” to which rural irrigation systems could give rise. Together with the rise in population, the city saw the building of several temples in innovative techniques, some with their own storehouses, and also the flowering of stone carving and seal carving, metallurgy, and writing. The demand for emerging crafts and techniques was “concentrated” in the early city. Writing meant that the meanings of visible signs could be read/understood the same way by all those who received a written message. (The rich cultural life of the earliest cities is a point to which this essay will revert.)

However, some centuries later (in the later Early Dynastic period and subsequently) the built-up area of Uruk city shrank in size. Very much later, under oppressive Sassanian and Abbassid taxation, the cultivated area of central Iraq shrank (1981:186-210). It is said that the Abbassid period being the area of quite another historical specialization, it is not given detailed attention in Heartland. Without wishing to point a finger I would ask whether this reflects the norm in western archaeology: scholars of ancient civilization shrug off the Islamic period as irrelevant.

As remarkable as is Adams’ synthesis of the process of development in Iraq (the big picture), is his explication of the methods by which he derived his survey data and constructed his maps.

If sites of the same archaeological period fell into a linear pattern, he inferred that a river course or canal carried water in that period. He used air photographs, on which some water courses were visible as faint discolorations. Surface pottery on surveyed mounds helped decide their period of occupation. Maps from various sources and of varying detail were also used together with KLM air photos and the very beginnings of LANDSAT imagery. The text in *Heartland* (e.g., pp.28-38) conveys detailed cautions of how the mapping could go wrong, and what corrective measures could be used. This is an object lesson in presenting the findings of a survey in an honest manner, without covering up gaps or unknown or hypothetical contents, which is all too common these days as field workers scramble for funds from various agencies not themselves equipped to evaluate archaeological field survey work.

My paper began with the work of Gordon Childe. It is important to appreciate the fact that for Childe the earliest Bronze Age cities experienced the emergence of several specializations in crafts and metallurgical technology. By definition then, city dwellers had diverse professions supplying smelted, cast, or alloyed copper, rotary wheels for transportation of bulk goods, water transportation, and quarrying also. One can realize that such specialization was feasible when there was food grain produced by others to feed craftsmen, transporters, miners, and others. So surplus production and full-time specialization were interlinked in Childe's theory, as was the ability to raise truly monumental buildings. The place for writing was, in Childe's theory, necessary for newly formed administration systems to keep records and issue memoranda, and devise calendars for following time schedules. This in total was truly a profound change in culture, and it was perhaps unfair of Adams to allege that Childe had suggested "a mixed bag of characteristics" with only assumed connections (Adams 1966:10)—in fact there were necessary connections between several of Childe's "ten". Many building, warring, and craft technologies, for instance, depended on copper or bronze tools or weapons. Impersonal communication, record keeping, and the administrative control of the state all depended on writing. Ration lists written in cuneiform indicate that a palace could hand out grain to reed weavers, leather workers, stone cutters, etc. as Adams himself has said (1966: 143). In summary, and most importantly, Childe had concluded that it was only to the [newly formed] city that craftsmen, especially hitherto peripatetic metalsmiths, could belong.⁴

Evolution went beyond the Childe framework in Adams' third chapter, "Kin and Class". It is by now well understood that the emergence of social stratification did not mean that kinship was no longer relevant. Kinship amongst occupation groups and rural communities continued to be important. A ruler's temple building project may arrange for different clans or lineages to report for corvee work, or

large tracts of agricultural land might be sold by several joint holders, united by descent from a few men. Later investigations into kinship institutions have pointed out that it is when a state or government does not have the capacity to organize a certain sphere of activity, that kin groups become relevant.

Did Adams' work sow seeds for the younger generation to tend where he had left off?

In *Ancient Mesopotamia at the Dawn of Civilization* (2008), G. Algaze, though in a somewhat different framework and giving due attention to third-millennium BC evidence for transport, the textile industry, trade overseas and by river, etc., suggested that the characteristics we see in a city during its formative period can be clues about its formative factors—such is the movements of people into newly walled towns, so that Uruk was less than 100 ha in the Early Uruk period, but 250 ha in the Late Uruk, and even larger in the Early Dynastic period. We must thus contend with conflict between agrarian communities, and look for elements that disrupt stability in the rural economy and cause population movements (mentioned by Adams). The importance of trade in textiles, minerals and mineral products, grain, etc. is part of the causation package. Algaze gave emphasis to the mobilization of labour and to innovations in the ways of organizing labour. He finds that population increase goes in tandem with the expansion of managerial institutions, so that scribal activity increases in leaps and bounds. Apropos of the many innovations seen in the new city of Uruk, he says, “Borrowing a page from V. Gordon Childe we may use the term ‘labour revolution’” to describe the new ways of commodity production (p.128). “Writing was a key component of the labour revolution” (p.138).

Sensitive archaeologists engaging in the early river valley civilizations have been aware that the subject has, to all intents and purposes, been appropriated by scholars trained in and working with the western tradition. Therefore it has been rewarding to find a paper with one author who is Iraqi. This is ‘Traditional Dam Construction in Modern Iraq’ by Stephanie Rost and Abdulhamir Hamdani, published in *Iraq* vol LXXIII, 2011, pp. 201-220. This valuable paper gives information on village-level constructions of dams and canals, organized by local tribal leaders, that were not available in the book by R. A. Fernea mentioned above. Hamdani has firsthand experience of canal digging and ‘dam’ construction by group initiative and local organization. The largest canals were 10 to 12 m wide and ran for about 15 km. Essential for the head dams across these were the trunks of date palms, same brickwork, and earth, topped by two or three terracotta pipes, arrangements that could last for about three years. A host of fascinating other details are given in this paper. One can only hope that more space will

be given to non- Europeans and non-Americans to publish their work on Mesopotamia.

If I have seen further it is by standing on the shoulders of giants – Isaac Newton 1676.

We are like dwarfs on the shoulders of giants, so that we can see more than they, and things at a greater distance, not by virtue of any sharpness of sight on our part...but because we are carried high and raised up by their giant size. (Bernard of Chartres c 1130)

Notes

1. Actually I would suggest that his *Heartland of Cities: Surveys of Ancient Settlement and Land Use on the Central Floodplain of the Euphrates* (Chicago: University of Chicago Press 1981) is the greater contribution, as it gives a synthesis of the historical sequence in pre-modern Iraq and utilizes the surveys that Adams himself had made over several seasons of field work. It is however more difficult reading for scholars engaged in research outside western Asia.
2. Especially fields at the tail ends of canals
3. Robert A. Fernea's study of the ethnography of the El Shabana tribe and its mode of irrigation is the basic source archaeologists and anthropologists have used for self-help irrigation work in central Iraq under Ottoman rule. (*Shaykh and Effendi*, Cambridge, Mass: Harvard University Press, 1970).
4. In his 1957 paper, thus, Childe asserted that this was a Bronze Age when bronze came into regular use for weaponry and the tools of production.

References

- Adams, Robert McCormick. 1966. *The Evolution of Urban Society: Early Mesopotamia and Prehispanic Mexico*. New Brunswick (USA) and London (UK): Aldine Transaction (A division of Transaction publishers).
- 1981. *Heartland of Cities: Surveys of Ancient Settlement and Land Use on the Central Floodplain of the Euphrates*. Chicago: University of Chicago Press.
- Algaze, G. 2008. *Ancient Mesopotamia at the Dawn of Civilization*. Chicago: University of Chicago.
- Childe, V. Gordon. 1950. 'The Urban Revolution'. *Town Planning Review*, 21.1:3-17.
- 1957. 'The Bronze Age'. *Past and Present*. 12: 2-15.
- Fernea, Robert A. 1970. *Shaykh and Effendi*, Cambridge, Mass: Harvard University Press.
- Wright, Henry. 1969. *The Administration of Rural Production in an Early Mesopotamian Town*. University of Michigan: Ann Arbor.