

Archaeology: Transitions in Prehistory

If any archaeologists are around tens of thousands of years from now to dig through the leavings of our culture, they will be overwhelmed with evidence. Revolutions from the rise of the automobile to the fall of the Soviet Union will be easy to decipher from the rich mounds of junk created by our way of life. But the biggest revolutions in the history of our species happened 9000 or more years ago and left only sparse and equivocal traces. The four News stories in this special issue describe how archaeologists are struggling to build a picture of crucial transitions that made us who we are today: the emergence of language, art, agriculture, and settled life in villages and towns.

Because the evidence is scanty, new digs and techniques can transform long-held views. A 9000-year-old settlement in Anatolia was once hailed as the earliest city, with shared institutions, a division of labor, and a reliance on agriculture. But as Michael Balter describes on page 1442, a meticulous new excavation of the site is showing something startling: The people of this high-density settlement, and other early communities, still depended heavily on hunting and gathering and may have settled down for some still-mysterious cultural reason.

Another assault on the view that settlements and agriculture emerged together in a single "Neolithic Revolution" comes from new techniques for tracing the rise of farming. On page 1446, Heather Pringle explains how tiny plant fossils are allowing archaeologists to spot the first signs of crop domestication thousands of years earlier than had been thought, and to find them in unexpected places, such as the South American rainforest. In many regions, settlements came thousands of years after crops, implying a long, slow transition to the agrarian way of life.

Further back in time, the revolutions are, if anything, more momentous: the advent of language and of the ability to think symbolically, expressed most clearly in art. To most archaeologists, both art and complex language are part of a behavioral revolution that swept the Old World some 40,000 years ago. But the evidence leaves room for debate. As Tim Appenzeller and Constance Holden describe (pp. 1451 and 1455), a handful of sites and artifacts, scattered widely in time and space, have convinced some archaeologists that this was no revolution at all, and that well before 40,000 years ago, humans were already making art and speaking much like us.

—TIM APPENZELLER, DANIEL CLERY, AND ELIZABETH CULOTTA

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