

earth history—the *Anthropocene*—in which our actions are the most important factor in biological evolution, and in several of the planet's biogeochemical flows and geological processes.

How people created the webs of interaction, how those webs grew, what shapes they took in different parts of the world, how they combined in recent times into a single cosmopolitan web, and how this altered the human role on earth is the subject of our book. With luck, this perspective on the past will shed a ray of light on the dilemmas of the present—and future.

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THE HUMAN APPRENTICESHIP

Shattered bones, chipped stones, and bits of charcoal are all the evidence we have of how our remote ancestors actually lived. By now, archeologists have studied thousands of sites and retrieved millions of fragments from them; but interpreting how humanity's career on earth got started on the basis of such evidence remains a matter of guesswork. A lively imagination is needed to reconstruct human communities from scattered bones and stones; and the resulting figments of expert imagination immediately become targets for other experts to shoot down. Yet some landmarks seem sure; and recently introduced techniques of chemical analysis date many finds with more and more precision. All the same, almost everything remains tentative. Even a single new discovery may upset currently prevailing notions at any time.

Amidst the resulting uncertainty, what are the most plausible guesses about the human apprenticeship starting from the time when our ancestors came down from the trees?

First of all, this fateful grounding took place in Africa, where our apelike ancestors ventured onto savanna landscapes something like 4 million years ago. Savannas are dry, grassy plains with scattered clumps of drought-resistant trees that presumably offered them more or less secure sleeping places at night. On the savanna, rainy seasons alternate with dry periods when access to water for drinking was essential for grazing animals and for our ancestors as well. Protohumans were unusually versatile. They sustained their bodies and their energy-consuming, enlarged brains with a varied, high-quality diet of nuts, fruits, roots, and leaves as well as the bodies of small animals, insects, and grubs. Almost

