

# Think multitasking is new? Our prehistoric ancestors invented it

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Answering e-mail while toggling between telephone conversations. Monitoring social networking sites while working. Supervising the kids' homework while listening to the news and cooking dinner. The abundance of contemporary distractions offers many reasons to curse multitasking.

But a UCLA anthropologist refuses to join the chorus. In a new book that explores the long history of [multitasking](#), Monica L. Smith maintains that human beings should appreciate their ability to sequence many activities and to remember to return to a task once it has been interrupted, possibly even with new ideas on how to improve the activity.

"I don't think it's worth saying multitasking is bad," said Smith, the author of "A [Prehistory](#) of Ordinary People" (University of Arizona Press). "We can do it, and that is astonishing."

In fact, Smith, an associate professor of [anthropology](#), contends that the multitasking is the ability that separates human beings from animals: "Multitasking is what makes us human."

Vast reserves of memory and the ability to project into the future are the qualities that enable humans to juggle multiple competing demands and to pick up and put down the same project until completion, she said. Animals, by contrast, lack these abilities.

The same cognitive capacity enables such uniquely human abilities as

language and the ability to comprehend time and space across increments ranging from the most immediate to the most distant, she contends. Smith also credits multitasking with our ancestor's considerable track record in innovation, particularly at the hands of ordinary people.

"Great deeds have been made possible by the collective experience of people who multitasked through their everyday lives ... and then who devoted some extra portion of their time, energy and the fruits of their labor into coming up with fabulous inventions and building complex societies," she said.

Yet in the popular imagination, contemporary times have some kind of corner on the multitasking market.

"People seem to think that the past was this simpler time with fewer interruptions because so many of the modern gadgets we have today had yet to be invented," Smith said. "But we've been multitasking from the beginning. Every object that we have from the past is the result of a dynamic process where people were being interrupted all the time."

Smith, who specializes in prehistoric economic networks and in the archaeology of consumption and material culture, traces the beginning of multitasking back millions of years to our first bipedal ancestors.

"Once they started walking on two feet, their hands were free to pick up tools, fibers, fruits or kids, and their eyes could look around for opportunities and dangers," she said. "That's the beginning of multitasking right there."

By the time tool-making started 1.5 million years ago, the ability to multitask would have been essential because the linear sequence of tool production would have been subject to frequent interruptions, she said.

For these hunters and gatherers, multitasking would have taken the form of foraging for food or hunting for game while keeping an eye out for stones and other materials with which to make tools, Smith said. Because children often would have been in tow, protecting them — especially from potential predators — would have been part of the mix.

Climate changes that made the globe drier and hotter some 10,000 to 12,000 years ago made the ability to multitask all the more valuable by paving the way for agriculture and animal husbandry, Smith said. Cycles of plant and animal life posed constant scheduling challenges and interruptions for these early settlers. Farm life also demanded the creation and maintenance of a whole new array of objects and structures for food storage, further increasing the need to juggle multiple tasks and priorities.

When humans first moved into cities about 6,000 years ago, the demands met by multitasking increased once again to levels that do not differ that much from today's levels, Smith insists.

"People were trying to cook things in the household while other people were trying to make things," she said. "Night would be coming along and tasks had to be finished before it got dark outside. The seasons would be changing, adding another layer of time pressure. Unexpected visitors would arrive and they'd need to be fed. Or someone was successful at hunting, so all of a sudden, a new animal would show up and everything has to be dropped so that the animal can get gutted, skinned, cleaned, chopped and stuck into stew pot."

Smith finds support for her theory by combining research from two fields. From archaeology, she takes the calculations extracted from archaeological digs to determine the number of people who occupied prehistoric sites and the kinds of human activities that were undertaken there — such as making tools, pots and beads. From anthropological

studies of traditional people today, she takes estimates of how long it takes to make similar objects using similar approaches.

"We can calculate how much prehistoric people needed to eat, how long it takes to do a particular kind of task, and any seasonal restrictions on different tasks," Smith said. "We find that there's no way that you could sit down and do any of these things from start to finish. Multitasking had to be involved."

Multitasking also makes sense from a biological perspective, Smith argues, citing recent research by economists, folklorists, neurologists and archaeologists. Researchers have noted that the type of cognitive shortcuts involved in multitasking extends the number of activities humans can accomplish without having to tap higher-order cognitive abilities such as reasoning.

"Reasoning is expensive in time and energy, and the brain circuitry of multitasking reserves this 'expensive' ability for activities with the highest payoff, including decisions about cooperation or conflict with others and the subtleties of choosing among different types of goods and priorities," Brian Loasby, a professor emeritus of economics at Scotland's Stirling University, says in the book.

In addition to being efficient, the dynamic process of repeatedly putting down and picking up tasks by generation after generation of ordinary people has provided an important opportunity for innovation, Smith argues.

"Our ancestors might have set down the stone tool they were making for an hour, a day or a year because a new kid was born or somebody died or a flood came or dinner had to be made," she explained. "When they came back to the tool, they were not exactly the same people who had put it down. Maybe they had learned a new technique, gotten some new

information about creating such an object or had thoughts about improving it by changing its shape."

By appreciating the role of multitasking, the role of ordinary people in laying the foundation for great civilizations comes into clearer focus, she argues.

"Every human-made object is the result of people who were consciously integrating all the things that they knew and were learning into the production process, speeding innovation," she said. "When leaders finally came into the picture and began organizing people to build tombs and temples, it was just another layer of activity on top of what ordinary people had already been doing for thousands of years."

Provided by University of California Los Angeles

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