

## CHATTERBOX

### The Audio-Book Menace

By Timothy Noah

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Evidence is mounting that it's dangerous to use a cell phone while driving even with "hands-free" technology. Last year, Chatterbox wrote about a [study](#) showing that any verbal communication stimulating the formation of mental images reduced a driver's eye movements. (See "[Friends Don't Let Friends Drive Thunk](#).") Now a [new study](#) by Carnegie Mellon's Center for Cognitive Brain Imaging, [written up by Sandra Blakeslee](#) in the July 31 *New York Times*, suggests that pretty much all verbal communication reduces the brain's ability to perform spatial thinking when the two tasks are performed at the same time.

As an enthusiastic multitasker who's rarely seen behind the wheel without air-traffic-control-like headgear for barking into his cell phone, Chatterbox is dismayed to learn that he may be a menace to himself and others. But he also wonders why the dangers posed by audio books and the more intellectually demanding news radio broadcasts haven't come under similar scrutiny. Actually, he doesn't wonder. There's a cultural bias against cell phone users among the sort of people who read the *New York Times*. We're noisy, we lack any sense of privacy, and we herald a communications era that values audio-visual communication over the written word. Or so the stereotype goes. Meanwhile, *Times* readers are rather fond of (indeed, are often indistinguishable from) the sort of people who listen to BBC recordings of *Troilus and Cressida* or NPR reports on global warming while they drive their battered Volvos to the food co-op. They're refined, they're nonmaterialistic, and they're the only bulwark against the cultural depravity that threatens to engulf American society. Or so the stereotype goes. Clearly, though, if decoding complex verbal messages makes it harder to pay attention while driving, then audio books and public radio represent a serious threat to auto safety. A.E. Housman once observed that whenever stirring lines of poetry flitted into his mind while shaving he invariably ended up bleeding. Imagine Housman behind the wheel of an SUV!

You might argue that talking on a cell phone, because it's interactive, requires more attention than listening to a tape or to the radio, which is essentially passive. Possibly so. But the Carnegie Mellon findings ("Interdependence of Nonoverlapping Cortical Systems in Dual Cognitive Tasks," published in the August issue of *NeuroImage*) seem almost as applicable to books on tape as they do to cell phones. Eighteen people, aged 18 to 32, were asked to listen to general-knowledge sentences such as, "The pyramids were burial places, and they are one of the seven wonders of the ancient world." They were then asked to indicate whether the sentence was true or false by pushing one of two buttons with their right thumb. Simultaneously, the test subjects were asked to look at paired drawings of three-dimensional figures from different angles, some of which depicted the same object, and some of which depicted slightly different objects. They were asked to indicate which pairs were the same and which were different by pushing one of two buttons with their left thumb. The scientists recorded the multitasking participants' brain activity with MRIs and compared these to MRIs where the participants were taking only the sentence comprehension test or the spatial comprehension test. They found that even though the two tasks required completely different parts of the brain, the amount of brain activity measured while doing *both* activities simultaneously was only 56 percent of the total amount of brain activity measured while performing the two activities sequentially. "[T]here may be biological mechanisms that place an upper bound on the amount of cortical tissue that can be activated at any given time," the Carnegie Mellon scientists concluded.

Chatterbox rang up the study's lead author, psychologist Marcel Just, to share his anxiety about the audio book menace. "You're absolutely right," he said.

**An audio book or an engaging radio broadcast can be just as demanding as a cell phone conversation, with the following exception: A cell phone conversation partner is an immediate demand--somebody who is talking at his own rate and expects an answer. It's a little impolite to say to somebody, "Stop talking." And yet, that's the kind of social step that's appropriate in a heavy**

**traffic situation. You can reach over and turn down your radio, as most drivers do in a demanding traffic situation. But with a cell phone partner, you've got this living, breathing collaborator in this social interaction who is oblivious to the driver's other task.**

Actually, Chatterbox has never had much difficulty telling his cell phone conversation partner to clam up. But stimulating sentences uttered in expertly modulated tones for widespread public consumption have been known to mesmerize him. "You can't legislate against interesting radio shows or books on tape," Just pointed out. No, but perhaps one can be grateful that most talk radio (and also, many audio books) are relatively *undemanding*. Howard Stern may be a blight on popular culture, but he's a blessing to auto safety. *All Things Considered*, on the other hand, is unsafe at any speed.

*Illustration by Mark Alan Stamaty.*