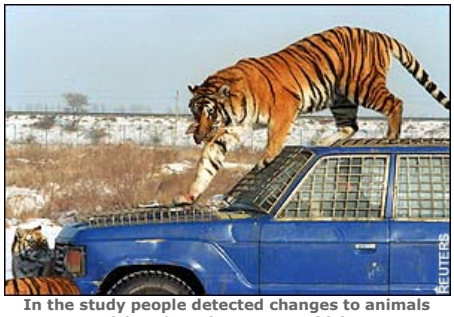
# Cut road deaths by making 'animal cars'

**By Roger Highfield, Science Editor**
Last Updated: 10:01pm BST 24/09/2007

Road safety campaigners could cut the death rate by lobbying for cars to be made to look more like animals, and for pedestrians at night to use fluorescent markers that highlight the way they move.

That is one implication of an experiment to show that people have stone age brains that are unconsciously attuned to detecting the movement of animals, rather than inanimate objects such as cars, because the former played such a key part in the survival of our ancestors.



In the study people detected changes to animals quicker than changes to vehicles

The American study, published in the Proceedings of the National Academy of Sciences, shows that the modern human brain carries the visual priorities of our hunter-gatherer ancestors and is still more likely to track a tiger- or even a chipmunk - than cars and trucks, even though they see many more of the latter and their lives now depend on noticing where they are on the motorway.

What our eyes look at is guided by brain mechanisms that pick out some portions of a scene over others. Since keeping an eye on predators and prey was crucial for survival during our evolution, Joshua New of Yale University, working with Profs John Tooby and Leda Cosmides of the University of California, Santa Barbara, decided to study whether we learn what is important to track or inherit it.

The researchers showed subjects pairs of photographs of natural scenes in rapid alternation, with the second photograph including a single change.



People were more than a second slower in detecting changes to vehicles, silos or mugs than to more rarely experienced animal species, such as elephants and pigeons.

"For example, we have two different savannah scenes, one with a tiny elephant in the far distance that is very difficult to see against the background trees, the other with a bright red minivan in the foreground, taking up a much larger proportion of the picture," explained Prof Tooby.

"Although both were appearing and disappearing from the picture or flipping back and forth, people noticed these changes to the elephant 100 per cent of the time, but almost 30 per cent of people entirely missed these changes to the high contrast, bright red minivan."

Overall, they were three times more likely to miss a car, indicating that familiarlity and learning are not the source of this difference. "This is the first high-level, category-specific attentional system found for a stimulus class other than humans," they said. In other words, the brain is attuned to detecting animals.

The bias to detect animals, the authors conclude, is like the appendix: present in modern humans because it was useful for our ancestors, even if useless now. But it could be exploited, according to Prof Cosmides.

"It may seem fanciful, but it is possible that painting cars to look more like animals might increase attentional monitoring of them," she said.

"Have you ever seen those "flying tiger" airplanes from WWII? (They have a tiger face painted on the front). They are very hard not to look at."

Dr New added that pedestrians could do more to be attention-grabbing at night. " We appear to be robustly prepared to detect and accurately recognize biological motion (and particularly people's) from very impoverished stimuli.

"By that, I'm referring to point-light displays in which only small lights attached to a person's joints and limbs are visible.

From that even a relatively few luminescent stickers which indicate the entire body's motion (and that of my two dogs, when I walk them at night) should make us (and our intended paths) almost impossible to overlook (albeit pretty goofy looking)."

Road safety campaigners have to do more to take into account how our brains are stuck in the distant past

"The ability to quickly detect changes in the state and location of vehicles on the highway has life-or-death consequences," concludes the paper, "yet subjects were better at detecting changes to non-human animals, an ability that had life-or-death consequences for our hunter–gatherer ancestors but is merely a distraction in modern cities and suburbs."

The UK Department for Transport recently reported that the number of people killed in road accidents was 3,172, among 258,404 road casualties in 2006.



**External links**
**Proceedings of the National Academy of Sciences**