

Unsafe on taxis

Yellow cabs are less likely to crash than blue ones

To avoid accidents, flag down a bananamobile



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IN 1907 John D. Hertz, the owner of a taxi firm in Chicago, asked some academics at the University of Chicago to do a piece of research for him. He wanted to know what colour he should paint his cabs in order to make them stand out among the sea of black vehicles that then inhabited American city streets. The researchers' conclusion was: yellow. Now, more than a century later, a group of researchers at a different university have concluded that yellow was a wise choice for other reasons, too. In a study just published in the *Proceedings of the National Academy of Sciences*, Ho Teck Hua of the National University of Singapore and his colleagues show that yellow taxis are less likely to be involved in accidents.

Dr Ho's research made use of a merger that took place, in 2002, between two Singaporean taxi companies. One of the precursor firms had a yellow fleet. The other's was blue. The merged concern has continued that bichromatic tradition to this day. At the moment it owns 4,175 yellow taxis and 12,525 blue ones. All are the same model (a Hyundai Sonata) and all undergo the same maintenance schedules. Any differences in safety between the two, Dr Ho reasoned, must therefore be caused by their respective colours.

To work out if such differences actually exist, he and his colleagues analysed three years' worth of data supplied by the firm. They found that its blue taxis were involved in an average of 71.7 accidents per thousand vehicles per month while its yellow ones were involved in an average of 65.6. The yellow ones, in other words, were 9% less likely to have an accident.

To confirm that what they had observed was nothing to do with the drivers of the respective cabs, Dr Ho and his team picked a fifth of those drivers at random and studied their behaviour behind the wheel. They did this by looking at data collected by satellite-tracking devices carried by each of the firm's taxis. These devices record, every 15 seconds, a cab's location and its status (free to pick up a fare, carrying a passenger or on a break). These data showed that yellow cabs' drivers were driving in an identical manner to those of blue cabs.

The researchers then delved into detailed accident reports, looking at the nature of each accident and the lighting conditions in which it had occurred. They had two hypotheses.

The first was that if yellow really was having a protective effect, a yellow cab would be less likely than a blue one to be involved in a collision when it was clearly in the view of the other driver involved, but not when it was not. This proved true.

The second hypothesis was that yellow would grant a greater advantage at night than during daylight hours, since it contrasts more strongly than blue does with a dark background. This, too, was true. When the researchers compared accidents occurring in the three sorts of lighting condition (daylight, streetlight and no light) listed in the accident reports, they found that the rate-difference was indeed greatest

in scenes illuminated by streetlight. In this case, yellow cabs suffered 4.5 fewer accidents per 1,000 taxis per month than did blue cabs, while in daylight, the difference was two. (There were not enough nocturnal collisions with no streetlights around for a meaningful comparison to be made in this case.) Based on these findings, Dr Ho calculates that if the firm changed the colour of its entire fleet to yellow, it would, over the course of a year, have to deal with 917 fewer accidents and would save around S\$2m (\$1.4m).

Yellow, then, seems to be a lucky colour for owners of cabs and their customers. It certainly proved lucky for John D. Hertz. The Chicago Yellow Cab company, as he renamed his firm, was the foundation of a business empire that led, eventually, to the world's largest car-hire company. Its logo? The word "Hertz", in black, italic letters. On a yellow background.