

ALL HAIL THE NEAR KING



Aside from a very recent blink in time, distance vision has been king in human history. As early man wandered the African continent searching for sustenance while avoiding predators, a lack of excellent distance vision was probably a death sentence. Researchers in the United Kingdom believe they have detected the evolutionary remnants of

gender-based differences in vision resulting from our hunting past.¹ Controlling for other variables, their study shows superior distance visuomotor performance for men and superior near visuomotor performance for women.

As people transitioned from hunter-gatherers to agrarians, villagers, and eventually city dwellers, many stopped traveling. For them, avoiding predators was no longer critical. Specialized trades developed, many of which required sharp near vision. In this population, the need for superb distance vision declined.

On the seas, however, lookouts were vital. Those with superb distance vision were prized for their ability to spot danger, particularly in poor conditions. Optical science advanced in the pursuit of better “lookout glasses,” and a pair of missing binoculars may have even played a role in the sinking of the Titanic.² A lookout is still crucial to all maritime activity, but the “eyes” of a ship are now those of the radar operator and the screen he or she views.

In military aviation, excellent distance vision has always been a valued asset. Legendary World War II fighter ace and test pilot General Chuck Yeager attributed his skill in aerial dogfighting in part to his superhuman distance vision.³ Although they still rely heavily on sharp vision, today’s pilots also use heads-up displays and a variety of ancillary tools to complete their missions. Moreover, there is speculation that the F-35 Joint Strike Force Fighter (Lockheed Martin) may be the last fighter jet

produced by the US Military, owing to the rising capabilities of Unmanned Aerial Vehicles, better known as drones. There are no visual requirements for becoming an Unmanned Aerial Vehicle operator other than normal color vision.⁴

Among the rest of the population, is the requirement for clear distance vision declining? For many patients, the top visual challenge is driving at night. Seniors sometimes rely on a “designated seer,” someone who can perform this task well. Younger patients headed out for a night on the town sometimes rely on a designated driver. Both groups, however, are increasingly summoning a car from Uber on their phones. According to a 2014 article in *The New York Times*, the daily use of Uber is cheaper than owning a car in some areas of the country.⁵

As ophthalmologists, how would our ideas of the importance of distance vision change if large numbers of our patients no longer drove? The people at Uber clearly believe that its fleet of vehicles will someday be autonomous cars, reducing costs and further diminishing distance vision as a human requirement. With Google, the world leader in autonomous vehicles, poised to enter the business of car-summoning apps, a big change is afoot. Our children will be the real drivers of this shift. Sadly, many spend their family car trips glued to smartphones instead of spotting state license plates on the highway (at a great distance). A large number can honestly say they rarely watch TV, but they mean that they watch shows 20 inches away on their laptops.

The growing importance of near vision represents substantial and powerful sociological forces. In writing this editorial, I struggled to think of a single requirement for distance vision that will likely increase in the next 20 years. As ophthalmologists, our job is to give patients what they want. For many of them, near will be king. ■

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