

# Scientists show that complex visual tasks reduce people's ability to notice a touch

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Royal Holloway research shows that completing a demanding visual task reduces people's ability to sense touch

Royal Holloway psychologists have demonstrated that completing a demanding visual task reduces people's ability to sense touch. The findings are particularly important given the growing use of tactile information in warning systems - for example, in cars.

The research by Dr Sandra Murphy and Dr Polly Dalton of Royal Holloway, University of London explains why you might not notice your phone vibrating if you are looking for a friend's face in a crowded place.

More alarmingly, you might be more susceptible to pickpocketing when you are searching a complicated departures board for details of your train.

The scientists asked volunteers to perform a letter search task of either low or high difficulty, as well as responding to the presence or absence of a brief vibration delivered simultaneously to either the left or the right hand (50% of trials). Their sensitivity to the clearly noticeable tactile stimulus was reduced when they carried out the more taxing visual search task.

"It was already known that increasing the demands of a visual task could reduce noticing of visual and auditory stimuli." says Dr Sandra Murphy. "Our research extends this finding to the sense of touch. This is particularly important given the growing use of [tactile information](#) in warning systems. For example, some cars now provide tactile alerts when they begin drifting across lanes – our research suggests that drivers will be less likely to notice these alerts when engaging in demanding visual tasks such as searching for directions at a busy junction."

The research, funded by the Economic and Social Research Council, is published today in the *Journal of Experimental Psychology: Human Perception and Performance*.

Provided by Royal Holloway, University of London

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