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The features marked with a star (*) are based entirely on material taken straight from standard research (and other Official and Therefore Always Correct) literature. Many of the other articles are genuine, too, but we don't know which ones.

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On the Front Cover

Noted, if fictional, pipe smoker Sherlock Holmes discusses a super-advanced theory. Drawings by Sydney Paget.



On the Back Cover

A Metz Speedster automobile at the edge of the Grand Canyon, 1914.



Some Coming Events

The Covid-19 pandemic has introduced excitingly boundless uncertainty as to whether, when, and where public activities will happen in the near future. In 2023 some will happen teledistantly.

(See [IMPROBABLE.COM](https://www.improbable.com) for details of these and other events.)

February 2023

— AAAS Annual Meeting,
Washington, DC, USA

March/April 2023

— Ig Nobel Euro (and Britannia) Tour

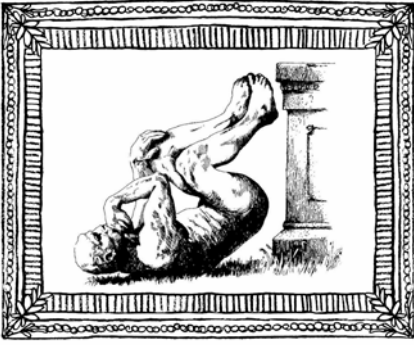
Aug 15, 2023

— American Chemical Society,
San Francisco, USA

September (exact date TBA)

— The 33rd First Annual Ig Nobel Prize Ceremony





IMPROBABLE RESEARCH REVIEW: NECK CRICK, CAR EYES, FAKE BUFFET

Improbable theories, experiments, and conclusions

compiled by Evelyn Good, Improbable Research staff

They Can't Do This

"Can You Do This? Extremely Difficult Interbodypart Coordination Tasks and Implications for Central Limitations on Control of Coordination," Eric Lewin Altschuler and Vilayanur S. Ramachandran, *Perception*, vol. 35, 2006, pp. 281-283. The authors, at the University of California, San Diego, report:

We have recently noted two extremely difficult inter-bodypart coordination tasks: Sitting upright in a chair, neither of us is able to rotate the neck in one direction in the coronal plane (e.g., clockwise), while simultaneously tracing the tongue on the lips in the other direction (counterclockwise). Similarly, we are not able, with the shoulder in neutral, the elbow flexed to 90°, the forearm in pronation, and the index finger extended, to rotate the wrist in one direction in the coronal plane while simultaneously rotating the index finger in the opposite direction. After appreciating our own inability to perform these tasks, we mentioned the tasks to a number of colleagues and they too were unable to perform them.

Can you do this? Extremely difficult interbodypart coordination tasks and implications for central limitations on control of coordination

Abstract. We have recently noticed our own inability to perform a number of interbodypart coordination tasks. The inability to perform these tasks indicates an intriguing central processing limitation on movement control, and study of these tasks should be helpful in understanding the neural mechanisms of motor control.

It has been recognized for well over a century (Müller 1840; Meige 1901) that the coordinated performance of some pairs of actions can be extremely difficult even though performing either action of the pair separately is easy. Over the last few decades, researchers (Baldiserra et al 1982; Swinnen 2002; Carson and Kelso 2004) have extensively and systematically studied coordination tasks, pinpointing particularly difficult tasks and also exploring the neural basis of coordination tasks. It has



Vilayanur S. Ramachandran, co-author of the study "Can You Do This? Extremely Difficult Inter-bodypart Coordination Tasks and Implications for Central Limitations on Control of Coordination." Drawing by Nan Swift.

IMPROBABLE RESEARCH REVIEW: NECK CRICK, CAR EYES, FAKE BUFFET [CONTINUED]

Automobile Eyes and Collisions

"Can Eyes on a Car Reduce Traffic Accidents?" Chia-Ming Chang, Koki Toda, Xinyue Gui, Stela H. Seo, and Takeo Igarashi, *AutomotiveUI '22: Proceedings of the 14th International Conference on Automotive User Interfaces and Interactive Vehicular Applications*, September 2022, pp. 349–359. The authors, at the University of Tokyo and Kyoto University, Japan, explain:

A previous study demonstrated that autonomous vehicles' (AVs) eyes help pedestrians make faster street-crossing decisions. In this study, we examine a more critical question, "can eyes reduce traffic accidents?" To answer this question, we consider a critical street-crossing situation in which a pedestrian is in a hurry to cross the street. If the car is not looking at the pedestrian, this implies that the car does not recognize the pedestrian. Thus, pedestrians can judge that they should not cross the street, thereby avoiding potential traffic accidents. We conducted an empirical study using 360-degree video shooting of an actual car with robotic eyes. The results showed that the eyes can reduce potential traffic accidents and that gaze direction can increase pedestrians' subjective feelings of safety and danger.

Can Eyes on a Car Reduce Traffic Accidents?

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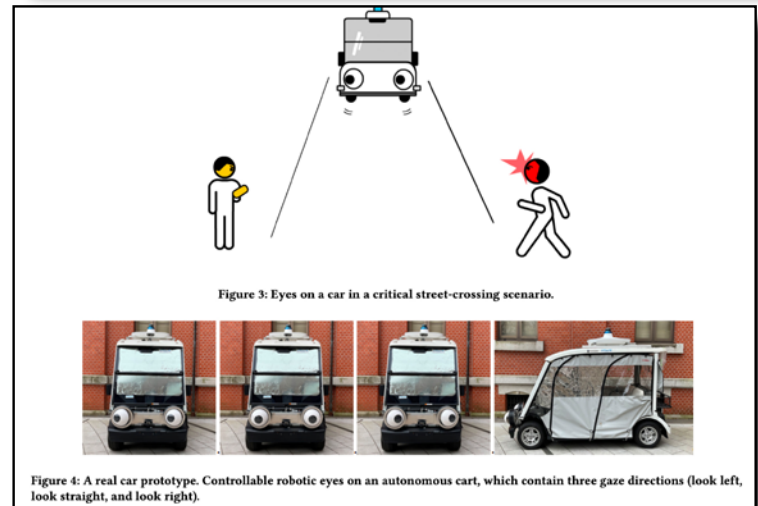
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ABSTRACT
Various car manufacturers and researchers have explored the idea of adding eyes to a car as an additional communication modality. A previous study demonstrated that autonomous vehicles' (AVs)

1 INTRODUCTION
Autonomous vehicles (AVs) provide significant opportunities and challenges to our daily lives on roads. One of the challenges is the design of interaction methods (i.e., unclear interactions) between AVs



Detail from the study "Can Eyes on a Car Reduce Traffic Accidents?".

57 People and a Fake-Food Buffet

"The Fake Food Buffet — A New Method in Nutrition Behaviour Research," T. Bucher, K. van der Horst, and M. Siegrist, *British Journal of Nutrition*, vol. 107, no. 10, May 2012, pp. 1553-1560. The authors, at ETH Zürich, Switzerland, report:

A total of fifty-seven people were invited on two separate occasions with an interval of 2 weeks to serve themselves a meal from a fake food buffet (FFB) containing replica carrots, beans, pasta and chicken. The external validity of the FFB was assessed in a second study by comparing meals served from replica foods (beans, pasta, chicken) with meals served from a corresponding real food buffet (RFB).... The amounts of food items served and (theoretical) energy content were compared. Correlation coefficients between the amounts of fake foods served were 0.77 (95 % CI 0.68, 0.86) for chicken, 0.79 (95 % CI 0.68, 0.87) for carrots, 0.81 (95 % CI 0.69, 0.89) for beans and 0.89 (95 % CI 0.82, 0.93) for pasta. For the FFB meal and the RFB meal, the correlations ranged between 0.76 (95 % CI 0.73, 0.91) for chicken and 0.87 (95 % CI 0.77, 0.92) for beans.

The fake food buffet – a new method in nutrition behaviour research

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(Submitted 28 January 2011 – Final revision received 20 July 2011 – Accepted 20 July 2011 – First published online 16 September 2011)

Abstract
Experimental research in behavioural nutrition is often limited by practical applicability. In the present study, we assess the reproducibility and validity of a new experimental method using food replicas. A total of fifty-seven people were invited on two separate occasions with an interval of 2 weeks to serve themselves a meal from a fake food buffet (FFB) containing replica carrots, beans, pasta and chicken.