

A Cognitive Approach to Situation Awareness: Theory and Application

Edited by Simon Banbury and Sébastien Tremblay

A book review by Amrita Bose

Situation Awareness or SA: we can all imagine what is meant by that. It means that you are aware of the situation around you, for example, when you are flying on a plane or driving a car. SA has become more and more important in predicting how operators, such as pilots, function. Operators have to function in complex environments, such as air traffic control centers or, of course, cockpits. A flight crew has to work in a team, and with a bit of luck, be aware of the situation as a team when a certain potentially hazardous situation occurs. In a more everyday-life situation, driving a car and the hazard perception anticipation of the driver can be looked upon as a measure for SA. And as a passenger on board of a plane or a car, we would surely be happy to arrive safely at our destination, knowing that our pilot or driver will be apt to respond to a near miss. A high level of situation awareness would be quite desirable in such a case!

If you are interested in getting to know more about Situation Awareness and its exact meaning, apart from just imagining what is meant by it, studying this book will provide a wide perspective of research in this area. Though some prior knowledge in this field is advised, since the book is aimed at a readership within this specific field of psychology - not exactly coffee table material, I would say.

SA seems to be constantly encountered with in various domains, and not just in aviation where it has its origins. However, defining as to what it exact-

ly means or encompasses, is not that unequivocal. The editors of this book bring together the diverse perspectives of SA in the cognitive field. A very interesting volume has resulted from this approach, consisting of an elaborate theoretical framework, as well as a distinct section of applied research. The editors have succeeded in delivering a cohesiveness, which resembles rigorous academic debate. Throughout the book cross-referencing takes place, suggesting that the authors of different chapters have read the chapters written by other authors as well. A brief background of all 41 contributors is listed in the book, which maybe just ascends the degree of SA of the reader!

To give you just an example of the various practical research that you can find in this volume: drivers' perception, effects of SA on flight training, infantry SA, team SA, as well as SA in sports. A review of various models and measures of SA are not absent either.

A constant element among these various perspectives is the reference to the theory and model of Endsley. The three levels of SA (perception, comprehension and projection) in this model are widely discussed. In the concluding chapter, Mica Endsley explicates her model as well as the current progress in this research area - a well-rounded final chapter!

Simon Banbury and Sébastien Tremblay have assembled a very useful book, specifically for those readers involved in the

domain of researching Situational Awareness. For students, this book might be more than serviceable when they are in the process of writing a thesis, since the theoretical framework and the discussion of such a wide variety of application will provide ample food for thought!

About the authors

"Simon Banbury is currently a Lecturer at the School of Psychology, Cardiff University and a Senior Human Factors Consultant at the Centre for Human Sciences, QinetiQ, U.K. From 1996 to 2000, he was a Senior Psychologist at the Defence and Evaluation and Research Agency (DERA), U.K. He received his Ph.D. in Psychology from the University of Reading in 1996.

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About the reviewer

Amrita Bose has been a general editor for *Aerlines* since September 2001 and was a board member of *Aerius* in the academic year 2002 – 2003. Amrita Bose graduated from the University of Amsterdam in September 2003 and holds a Master of Science in International Communication.

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