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COMPARATIVE AND NEUROPSYCHOLOGICAL RESEARCH IN HUMAN FACTORS PSYCHOLOGY

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Human factors, a rapidly growing discipline since World War II, is usually defined as the study of human-machine interactions. One also sees the term "ergonomics" used in defining the field, and this stems from the discipline's roots in industrial engineering. Most would agree that the field today includes the study of human-computer interactions, artificial intelligence, cockpit design, workplace design, information-processing and cognitive processes, robotics, occupational stress, human error and reliability, etc. It seems clear that this is a discipline for the psychologist whose interests lie primarily with the human species.

But psychology has a long history of work with non-human animals, often with an eye towards human applications. The question arises whether there is a role for the comparative psychologist to play in the human factors field. This question is addressed in the papers in this special issue. These papers are based on a symposium, Comparative and Neuropsychological Research in Human Factors Psychology, held at the 1991 American Psychological Society meeting in Washington, D.C. Duncan White addresses the significance of his work on the visual system of cats for our understanding of human visual process and proposes an applied physiological psychology; David Washburn discusses his work with non-human primates, which are used to model human task performance, including that which is pertinent to space travel; Roger Thomas discusses issues of comparative intelligence, indicating the value of research with monkeys in understanding human intelligence and other cognitive processes; finally, Duane Rumbaugh and Shelly Williams provide a commentary about these papers by addressing the idea of continuity in psychology, i.e., to what extent can we generalize from one species to another, particularly in humans, in psychology.

I organized this symposium in an attempt to develop a broader defi-

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nition of human factors psychology than is currently in use, something that even the current president of the Human Factors Society recognized as necessary (Sheridan, 1991). Greg Moran (1987) recently proposed that we establish a discipline called Applied Comparative Psychology in which all human-animal interactions would be appropriate for investigation. Consistent with this is the idea that the study of human factors would include investigations of problems involving seeing-eye or hearing-ear dogs, zoo design for improving the educational mission of those facilities, the study of the behavior of sea animals that military and sports divers encounter, and so forth. This seems to be crucial as human factors programs move from their birthplace in engineering departments of new homes in psychology departments.

REFERENCES

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