
Preface

Until just the past few years, research in multisensory neurophysiology had been conducted almost exclusively in non-human animal subjects. A particular focus has been in the cat superior colliculus but several cortical regions of cats and non-human primates have also been studied. These early studies revealed the presence of neurons that responded to inputs from more than a single sensory system and showed that these neurons often displayed “integrative” properties in that the response to simultaneous stimulation from a given pair of sensory modalities was not a simple linear sum of the two constituent unisensory responses. Clearly, the brain possessed a set of specialized processors for combining sensory inputs. Neurons such as these must surely be involved in the synthesis of our perceptual world which is so readily perceived as a unified whole despite the segregated peripheral afferent pathways by which the sensory inputs reach the brain. Given the seamless multisensory nature of our perceptions, it is perhaps surprising that relatively little multisensory research has been conducted, excepting the resolute efforts of a few labs. This was especially so for multisensory research in humans and up until a few years ago, there were almost no electrophysiological or hemodynamic imaging studies of multisensory processing. Thankfully, this situation is fast being remedied and multisensory research is enjoying a massive resurgence of interest in recent times.

Perhaps one explanation for why multisensory processing received so little attention was because the complexities involved in studying an isolated sensory system appeared so great that attempting to study two systems together seemed like an unnecessarily complicated and premature venture. Nonetheless, some of the organizing principles that appear to govern multisensory interactions are likely to be applicable to intra-modality interactions and there is the strong possibility that findings from multisensory research will shed new light on unisensory processing mechanisms.

This special issue is largely the product of the Second Annual Multisensory Research Conference, which we were privileged to host in Tarrytown, New York in October of 2000. Some 160 people attended this meeting and many of the papers in this issue were first presented there. Organized under the auspices of the International Multisensory Research Forum – IMRF, the conference brought together researchers from a wide variety of disciplines including behavioral psychophysiology, electrophysiology, functional imaging, computational modeling and social psychology. The papers in this issue will give the reader a sense of the diverse group of people that are currently working in multisensory research and in these days of strict specialization where sub-disciplines within a given research area tend to be somewhat isolated from each other, we believe that this diversity is one of the great strengths of this emerging field and that the ‘cross-pollination’ that results between disciplines is to be both celebrated and nurtured.

We would like to encourage the readers to visit the IMRF website (<http://www.wfubc.edu/nba/IMRF>) where the programs from the first two meetings as well as information about the activities of this organization are available. Additionally, details regarding the upcoming IMRF meeting to be held in Geneva in 2002 can be accessed. We would also like to express our sincere appreciation to all the contributors to this issue and the many people who served as reviewers.

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