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**INFORMATION PROCESSING
IN THE SOMATOSENSORY SYSTEM**

INFORMATION PROCESSING IN THE SOMATOSENSORY SYSTEM

Proceedings of an International Symposium
at the Wenner-Gren Center, Stockholm, 3–5 July, 1989

Edited by

Ove Franzén

*Department of Human Anatomy
University of Uppsala, Sweden*

and

Jan Westman

*Department of Human Anatomy
University of Uppsala, Sweden*

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The Contributors

Terry T. Allard
Cognitive and Neural
Sciences Division
Office of Naval Research
800 N. Quincy
ARLINGTON
VA 22217-5000 USA

Kevin Alloway
Department of Anatomy &
Neurobiology
Washington University
School of Medicine
ST. LOUIS
MO 63110 USA

I.N. Bankman
Department of Neuroscience
Johns Hopkins School of
Medicine
BALTIMORE
Maryland 21205 USA

Harold Burton
Department of Anatomy &
Neurobiology
Washington University
School of Medicine
ST. LOUIS
MO 63110 USA

James N. Campbell
Department of Neurological
Surgery
Johns Hopkins University
BALTIMORE
Maryland USA

Mary Carlson
Department of Neurobiology
Harvard Medical School
BOSTON
MA 02115 USA

James C. Craig
Department of Psychology
Indiana University
BLOOMINGTON
Indiana 47405 USA

Corinna Darian-Smith
Department of Anatomy
University of Melbourne
PARKVILLE
Victoria 3052
Australia

Ian Darian-Smith
Department of Anatomy
University of Melbourne
PARKVILLE
Victoria 3052
Australia

THE CONTRIBUTORS

Ronald Dubner
Neurobiology & Anesthesiology
Branch
National Institute of Dental
Research
National Institutes of Health
BETHESDA
Maryland 20854 USA

Robert W. Dykes
Department of Physiology
University of Montreal
MONTREAL
Quebec, Canada

Greg K. Essick
Department of Prosthodontics
University of North Carolina
CHAPEL HILL
N.C. 27514 USA

Curt von Euler
Department of Neurophysiology
Karolinska Institute
Box 60400
STOCKHOLM
Sweden

Oleg V. Favorov
Department of Physiology
University of North Carolina
CHAPEL HILL
N.C. 27599-7545 USA

Ove Franzén
Department of Human Anatomy &
Psychology
Uppsala University
S-751 23 UPPSALA
Sweden

Esther P. Gardner
Department of Physiology &
Biophysics
New York University
School of Medicine
550 First Avenue
NEW YORK
N.Y. 10016 USA

Antony Goodwin
Department of Anatomy
University of Melbourne
PARKVILLE
Victoria 3052
Australia

Sten Grillner
Department of Neurophysiology
Karolinska Institute
S-104 01 STOCKHOLM
Sweden

Steve Hsiao
Department of Neuroscience
Johns Hopkins School of
Medicine
BALTIMORE
Maryland 21205 USA

Heikki A. Hämäläinen
Department of Psychology
University of Helsinki
HELSINKI
Finland

Yoshiaki Iwamura
Department of Physiology
Toho University
School of Medicine
Omori-Nishi, Otaku
TOKYO
Japan

William M. Jenkins
Cognitive and Neural
Sciences Division
Office of Naval Research
800 N. Quincy
ARLINGTON
VA 22217-5000 USA

Roland Johansson
Department of Physiology
University of Umeå
S-901 87 UMEÅ
Sweden

THE CONTRIBUTORS

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- | | |
|---|--|
| <p>K.T. John
 Department of Anatomy
 University of Melbourne
 PARKVILLE
 Victoria 3052
 Australia</p> | <p>Robert H. LaMotte
 Department of Anesthesiology
 Yale University School of
 Medicine
 NEW HAVEN
 Connecticut USA</p> |
| <p>Ken Johnson
 Department of Neuroscience
 Johns Hopkins School of
 Medicine
 BALTIMORE
 Maryland 21205 USA</p> | <p>Michael Merzenich
 Coleman Memorial Laboratory
 University of California
 SAN FRANCISCO
 California USA</p> |
| <p>Edward Jones
 Department of Anatomy &
 Neurobiology
 University of California
 IRVINE
 CA 92717 USA</p> | <p>Richard A. Meyer
 Department of Neurological
 Surgery
 Johns Hopkins University
 BALTIMORE
 Maryland USA</p> |
| <p>Jon H. Kaas
 Department of Psychology
 Vanderbilt University
 NASHVILLE
 TN 37240 USA</p> | <p>Vernon B. Mountcastle
 Department of Neuroscience
 Johns Hopkins University
 School of Medicine
 BALTIMORE
 Maryland 21205 USA</p> |
| <p>D.G. Kelly
 Department of Physiology
 University of North
 Carolina
 CHAPEL HILL
 N.C. 2755-7545 USA</p> | <p>Ulf Norrsell
 Department of Physiology
 University of Göteborg
 S-400 33 GÖTEBORG
 Sweden</p> |
| <p>Dan Kenshalo, Jr
 Neurobiology & Anesthesiology
 Branch
 National Institute of Dental
 Research
 National Institutes of Health
 BETHESDA
 Maryland 20854 USA</p> | <p>David Ottoson
 Symposium Secretariat
 Wenner-Gren Center
 Sveavägen 166
 S-113 46 STOCKHOLM
 Sweden</p> |
| <p>Dan Kenshalo, Sr
 Department of Psychology
 Florida State University
 TALLAHASSEE
 Florida USA</p> | <p>Claude I. Palmer
 Department of Physiology &
 Biophysics
 New York University Medical
 Center
 550 First Avenue
 NEW YORK
 N.Y. 10016 USA</p> |

Edward R. Perl
 Department of Physiology
 University of North
 Carolina
 CHAPEL HILL
 N.C. 27599 USA

John Phillips
 University Laboratory of
 Physiology
 Parks Road
 OXFORD OX1 3PT
 England

Tim Pons
 Laboratory of Neuropsychology
 National Institute of Mental
 Health
 BETHESDA
 Maryland 20892 USA

Per Roland
 Pet Section
 Karolinska Institute &
 Hospital
 S-104 01 STOCKHOLM
 Sweden

Ranulfo Romo
 Department of Neuroscience
 Johns Hopkins University
 School of Medicine
 BALTIMORE
 Maryland 21205 USA

Rüdiger Seitz
 Pet Section
 Karolinska Institute &
 Hospital
 S-104 01 STOCKHOLM
 Sweden

Mandayam A. Srinivasan
 Research Laboratory of
 Electronics
 Massachusetts Institute of
 Technology
 CAMBRIDGE
 Massachusetts USA

Michael A. Steinmetz
 Department of Neuroscience
 Johns Hopkins University
 School of Medicine
 BALTIMORE
 Maryland 21205 USA

Michio Tanaka
 Department of Physiology
 Toho University School of
 Medicine
 Omori-Nishi, Otaku
 TOKYO
 Japan

Lars Terenius
 Department of Drug
 Dependence Research
 Karolinska Institute
 S-104 01 STOCKHOLM
 Sweden

W.N. Thompson
 Department of Anatomy &
 Developmental Biology
 University College London
 Gower Street
 LONDON WC1E 6BT
 England

Alex M. Thomson
 Department of Physiology
 Royal Free Hospital School
 of Medicine
 Rowland Hill Street
 LONDON NW3 2PF
 England

THE CONTRIBUTORS

xiii

M. Tommerdahl
 Department of Physiology
 University of
 North Carolina
 CHAPEL HILL
 N.C. 27599-7545 USA

Erik Torebjörk
 Department of Clinical
 Neurophysiology
 University Hospital
 S-751 85 UPPSALA
 Sweden

Nicole Tremblay
 Department of Medical
 Dentistry
 University of Montreal
 MONTREAL
 Quebec, Canada

Richard Warren
 Department of Neurology &
 Neurosurgery
 McGill University
 MONTREAL
 Quebec, Canada

Susan Warren
 Department of Physiology &
 Biophysics
 New York University
 Medical Center
 550 First Avenue
 NEW YORK
 N.Y. 10016 USA

Gerhard Werner
 Department of Psychiatry
 University of Pittsburg
 School of Medicine
 PITTSBURG
 Pa USA

Göran Westling
 Department of Physiology
 University of Umeå
 S-901 87 UMEÅ
 Sweden

Jan Westman
 Department of Human Anatomy
 Uppsala University
 S-751 23 UPPSALA
 Sweden

Barry Whitsel
 Department of Physiology
 University of North Carolina
 CHAPEL HILL
 N.C. 27599-7545 USA

William D. Willis, Jr
 Department of Anatomy and
 Neurosciences & Marine
 Biomedical Institute
 University of Texas Medical
 Branch
 GALVESTON
 TX 77550-2771 USA

Clifford J. Woolf
 Department of Anatomy &
 Development Biology
 University College London
 Gower Street
 LONDON WC1E 6BT
 England

Preface

In science, as well as in art, the human hand and the brain are closely linked partners. The theme of this symposium was the study of the neural mechanisms of tactile perception, that is to say, the neural representation of the external world relayed through the somatosensory system.

The most productive approach to this problem is that of single neuron analysis, which has led to successful explanations of primitive aspects of perception with relatively simple, but adequate, linking hypotheses.

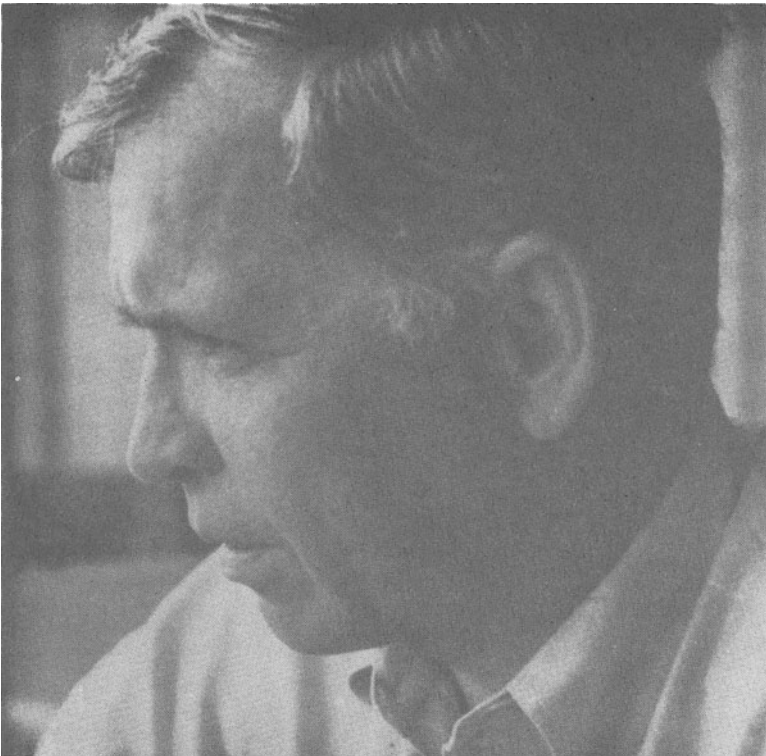
However, all of us who have practised this discipline of the neurosciences know that it is misnamed. The aim has never been to study single neurons in isolation, but rather, to reconstruct population events that are going on in the nervous system. It is therefore obvious that the most fruitful path to future research would be to study significant samples of those neuron populations that are assumed to be essential for the perceptual processes.

The most powerful tool in research is a good idea and a good hypothesis. In this respect, Vernon Mountcastle's contributions to neuroscientific knowledge and endeavour have few parallels. The breadth, focus and scientific creativity of his contributions have had an impact on current thinking about the major issues related to the operation and functioning of the nervous system that cannot be overstated.

The scope of his influence has led most of us who are engaged in research on the nervous system to realize that our findings are relevant to, and frequently anticipated by, the concepts of nervous-system function that were identified and developed by Vernon Mountcastle himself.

Since the 1990s have been declared as being "The decade of the brain", it is most appropriate to dedicate this volume to Vernon Mountcastle for his pioneering discovery of the columnar organization of the somatosensory cortex and for his many other important contributions to our understanding of the neural mechanisms of the higher functions of the brain.

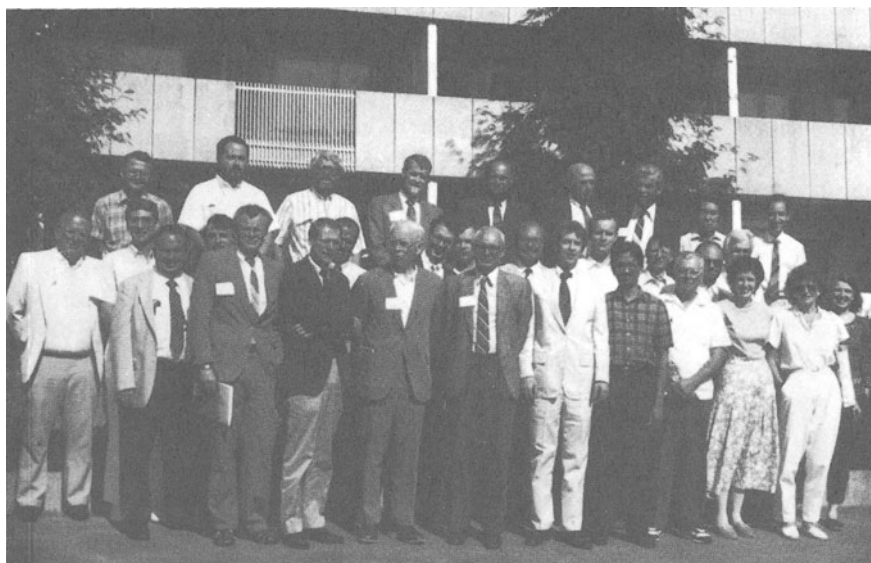
Ove Franzén
Uppsala
September, 1990



Professor Vernon B. Mountcastle, M.D.

The Scientific Committee

Ove Franzén, Uppsala, Sweden
Sten Grillner, Stockholm, Sweden
Ken Johnson, Baltimore, MD, USA
Lars Terenius, Uppsala, Sweden
Jan Westman, Uppsala, Sweden
Barry Whitsel, Chapel Hill, NC, USA



- | | |
|-----------------------|---------------------|
| 1 Mary Carlson | 16 James Campbell |
| 2 Alex Thomson | 17 Erik Torebjörk |
| 3 Susan Warren | 18 Roland Schmidt |
| 4 Dan Kenshalo, Sr | 19 Ulf Norrsell |
| 5 Mandayam Srinivasan | 20 Clifford Woolf |
| 6 Robert LaMotte | 21 Ken Johnson |
| 7 Ove Franzén | 22 Antony Goodwin |
| 8 Vernon Mountcastle | 23 Yoshiaki Iwamura |
| 9 James Craig | 24 Curt von Euler |
| 10 Jan Westman | 25 Edward Perl |
| 11 William Willis, Jr | 26 Ronald Dubner |
| 12 Michael Merzenich | 27 Robert Dykes |
| 13 Harold Burton | 28 Jon Kaas |
| 14 Edward Jones | 29 Tim Pons |
| 15 Greg Essick | 30 Oleg Favorov |

The participants of IUPS satellite symposium in front of
Wenner-Gren Center, Stockholm

TOUCH

The cranium is a storehouse
Stacked with the testimony
Of myriads of memory
That incessantly raise experience
To the rank of life.

Meissner and Vater Pacini,
The Apollo and Mercury of the skin,
Are the swift heralds of touch.

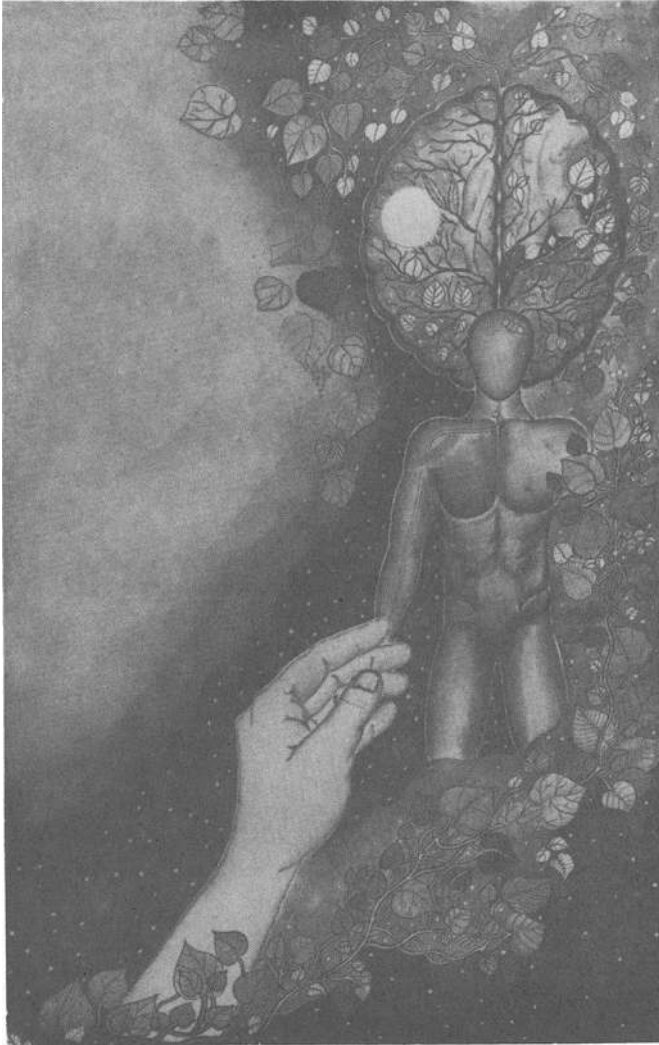
Impulse trains leave the fingertip
In saltatory frenzy
Journeying to the gracile core.
A flow of rhythmic signals
Passes the thalamic crossroad
For smooth forwarding
To the pyramidal cells of the central convolution,
Whose lofty architecture strives upward
Towards Cajal's solitary body.

In limbic expectancy you experience
The ecstasy and repose of touch
In your hands' encounter with the hip's soft parabola, -
The conclusive evidence that overcomes our distance
And points inward, nakedly,
To the core of being.

Ove Franzén

Horisont, 1986, No 3, p. 53

(Horizon, Scandinavian Literary Review)



TOUCH, Aquarelle (1989)

Susanne Hedlund
Falun, Sweden

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