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[LIBRARIES](#)

[YORK U ORGANIZATION](#)

[DIRECTORY](#)

[SITE INDEX](#)

[CAMPUS MAPS](#)

- [Home](#)
- [About the CVR](#)
- [News](#)
- [Members](#)
- [Seminar Series](#)
- [Conference](#)
- [Resources](#)
- [CVR Summer School](#)
- [Research Labs](#)
- [Training at the CVR](#)
- [Partnering with the CVR](#)
- [Contact Us](#)

- Friday, November 4, 1994  
Neural Basis of Selective Attention

1 I thought that I would keep this idea of 'minutes' going in case anyone was interested. So here they are for the 11/94 meeting.

2 Here is a list of the attenders. The people in parentheses didn't show. You will notice that a lot of people were unable to come this month. I understand they all have good excuses (eg. they were in Japan) and intend to come to future meetings....

SENIOR MEMBERS POST DOCS GRAD STUDS UNDERGRADS

Laurence Harris, (Kristiina McConville), Peter Mente, Eliana Klier, (Emre Onat), (Lani Lieberman), (Dan Zikovitz),(Jorge Sousa)

(Otmar Bock), (John Lipitkas), (Sean Hickey)

(Josee Rivest) <--- from Glendon

Keith Grasse, .Andrea Downie, Natalie Gringordo, Randy Penfield, Susahna Yanifka

Peter Kaiser

(Martin Regan),.(Marian Regan),.(Rob Gray), Alex Vincent, Christine Yeomans

(Hiro Ono),.(Mako Ichikawa), (Renate Korn), Igor ??, (Lorraine Gunther)

(Ian Howard), Alan Ho, Rob Allison, Hiro Kaneko

(Marty Steinbach), (Beth Irving), Jennifer Steeves, (Carol Dengis), (Herb Goltz)

John Tsotsos <--- Uof T computing department

(Doug Crawford) <---- not here yet

(Michael Jenkin), (Nicole Aucoin), (Kelvin Cheung)

3.0 I volunteered to 'put something together' for the next meeting. That will be for Friday 2nd Dec at 10.00. I felt that the Nov meeting was a bit rushed to try to fit in an hour slot. Since most people seemed to be able to stay at least until 11:30, I propose to make the official envelope 10 - 11:30 for the Dec meeting.

3.1 I will be talking about a project that Michael Jenkin and I are putting together on the perception of linear movement. The techniques involved include pushing subjects around and asking them how far they think they have moved - I will be soliciting opinions on how best to do that. Also manipulating the visual cues to movement using a virtual reality environment.

4.0 Keith Grasse gave a seminar/discussion group on the topic of "The neural basis of selective attention". His research specifically concerns the interactive loop between the superior colliculus, caudate nucleus, the substantia Nigra and the visual cortex. In keeping with the spirit of this group the work is pretty much at the drawing board stage. The following summary was written by me.

4.1 Cells in the superior colliculus, a structure in the midbrain that is intimately associated with the control of saccadic eye movements, show enhanced responses to visual stimuli if those targets are to be the targets of eye movements.

4.2 Amphetamines make the fields of superior colliculus cells bigger. These effects are not due to local effects of amphetamines on the colliculus.

4.3 Perhaps the way both these 'enhancements' operate is through the inputs from the substantia nigra to the colliculus. The substantia nigra might in turn be affected by its connections to the caudate nucleus and further connections between the caudate and the cortex.

4.4 Various proposed investigations were suggested involving stimulating various parts of the pathways electrically and pharmacologically to unravel the functional links in this influential circuit.

4.5 An intriguing link is with schizophrenia, a condition associated with the basal ganglia (including the caudate and substantia nigra) and with abnormal saccadic control.

5.0 Look forward to seeing you all on the 2nd Dec.

Laurence Harris

Keith Grasse  
York University