



Neuroscience in education, marketing and beyond ...are you ready for this?

**OPEN
MindLab
EVENT**

*free registration on
au.dk/arrangementer*

31. MAY 2012

13.00-16.00

Building 1342 - room 455

OPEN TO STUDENTS AND EDUCATORS
w./coffee and informal discussions after

"Based on how the brain works..." has become the argument of choice in many a field of practice – from education, over forensic psychology to marketing and political spin. In this workshop we get the newest ideas from scholars who have worked with neuroscience in the real world. Are we ready to bring the brain to work in places like schools and add-agencies?

Esteemed guest lecture

Paul Howard-Jones

Senior lecturer in education

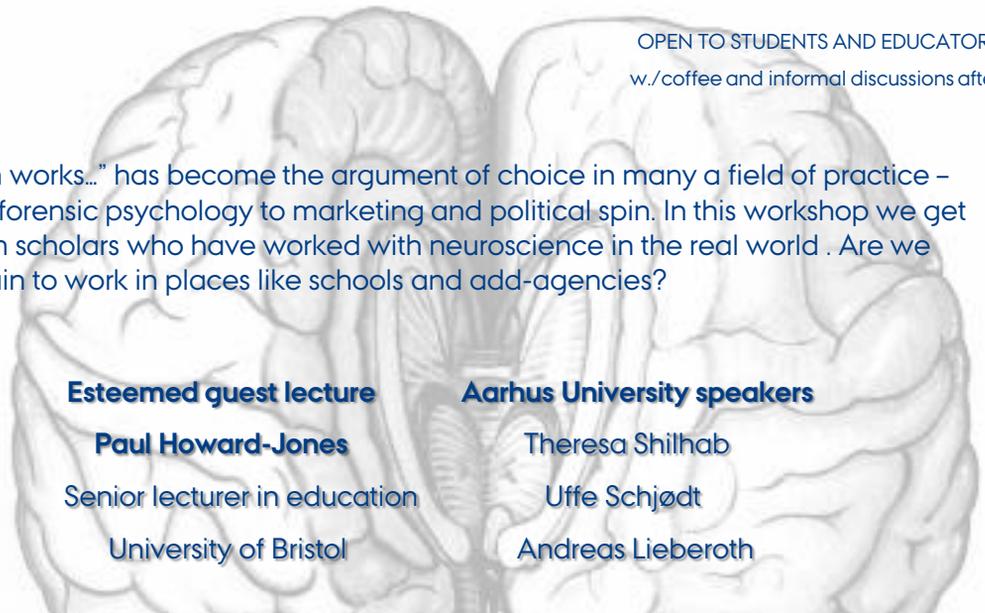
University of Bristol

Aarhus University speakers

Theresa Shillhab

Uffe Schjødt

Andreas Lieberoth



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MINDLAB
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31. may 13-16



PROGRAMME

Neuroscience and Education: Towards transdisciplinary research

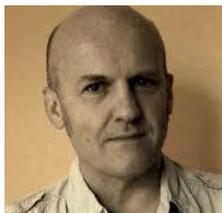
Paul Howard-Jones

University of Bristol, Graduate school of education

The idea that we should use our burgeoning understanding of the brain to improve education has a commonsense feel about it. But the past history of brain-based learning, with its unscientific and unevaluated concepts, suggests there are many pitfalls. The dialogue between neuroscience and education is still in its infancy, but already it suggests the need for a new field of inquiry that is both scientifically and educationally grounded. A scientific (neuroscience, psychology) understanding of learning will be crucial to enhancing the learning achieved in a classroom. But educational thinking will also be needed at every stage in such research, from developing tractable and useful questions, to executing the research and communicating its findings. Innovation will be required in developing methodology that embraces both natural and social science perspectives. If it can rise to these challenges, neuroeducational research may enrich both education and the sciences of mind and brain.

Case study: Games, Brains and Learning

There are at least two different views on the value of computer games for children's development and learning: they may either provide a threat or an opportunity. Insights from neuroscience are providing some clues as to why video games are so engaging and research suggests that, unlike most other types of technology, they may be a "special" environmental influence. In this lecture, it will be argued that the same neural and cognitive processes underlie both the more negative and the more positive potential of video games, and that we need to understand more about these processes to ensure they benefit, rather than disrupt, our children's education and development. Some recent research to investigate the neural mechanisms of gaming, as well as attempts to apply such understanding in the classroom, will be presented and discussed.



The MINDLab *Interacting Minds* project is pleased to welcome **Dr. Paul Howard-Jones**, Senior Lecturer in Education and the University of Bristol, and author of the groundbreaking *Introducing Neuroeducational Research*. Dr. Howard-Jones is notable for bridging the gaps between cognitive neuroscience and educational practice with a keen "hybrid professional" eye and great respect for practitioners' work and expectations.

AARHUS UNIVERSITY AND MINDLAB SCHOLARS

Brain insights and Marketing

Uffe Schjødt, Department of Culture and Society and MindLab

Two streams of insights on the brain appear particularly useful for marketing and advertising purposes. One is experimental neuroscience that probes the neural effects of exposure to products and commercials. The other is evolutionary psychology which explains how products and ads can be tailored to target dedicated cognitive systems in the brain. Both appear attractive at first sight, in fact almost seductive, but caution should be taken as methodological issues and cultural differences in both cases make the validity and reliability of these insights unknown.

'Derived embodiment' or how to explain abstract thoughts

Theresa Schilhab, GNOSIS Research Centre, Danish School of Education

Within the neurosciences current studies seem to suggest that conceptual knowledge is sustained by so-called embodied knowledge. Apparently, reading about 'cinnamon' activates embodied knowledge of cinnamon obtained by direct experiences which ground understanding and knowledge. Hence, the question arises: How can we have knowledge about abstract phenomena such as 'democracy' and 'black holes' or even knowledge of phenomena we have never experienced such as bacteria and dinosaurs? To grasp and solve the question besides neuroscience we are in need of other scientific approaches. In this talk, to address the question properly, I draw upon studies in contemporary sociology first to account for competent language use and second to launch the concept of 'derived' embodiment.

Brain science fiction – new technology, popular culture and applied neuroscience

Andreas Lieberoth, Psychology and behavioral sciences and MindLab.

Insights from the world of brain-science are more popular and sought after than ever. Hardly a week passes without a new and revolutionary study finding its way into the news, and from there into the repertoires of teachers, advertisers and designers, who constantly strive to update their understanding of how the mind works. Neuroscience and evolutionary theories are not just popular; they are convincing, and they are big business. This introductory talk presents a few cautionary cases that should make us weary of quick and easy brain-answers, and then reviews developments that look like they might link (neuro)psychological research, teaching and gaming even more in the future. Are we ready for this?