**5th Symposium on Decision Neuroscience**

**Düsseldorf, July 17th, 2017**

**Speakers and talks**

“Arbitration between model-based and model-free learning.”

*John O’Doherty, Caltech Brain Imaging Center*

“Brain circuit mechanisms for self-control failure.”

*Joshua Buckholtz, Center for Brain Science, Harvard University*

“The evolutionary origin of pro-sociality.”

*Judith Burkart, Anthropological Institute and Museum, University of Zurich*

“Social decision-making – distinct causal neural mechanisms?”

*Christian Ruff, Laboratory for Social and Neural Systems Research, University of Zurich*

**Host**

*Tobias Kalenscher, Heinrich-Heine-University Düsseldorf*

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European Brain and Behavior Society

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**Report**

Again, we are proud to have staged a highly successful symposium which exceeded our expectations. As every year, our aim was to organize a hub-event at which scientists from diverse disciplines in the decision-making field gather to discuss recent cutting edge findings. Within just a few weeks of opening registrations the maximum capacity was reached and we were happy to welcome over 100 guests at the event. The symposium attracted many researchers from regional research institutes, as well as students, the local media and other professionals. Thanks to the sponsors, admission was free and our visitors could be offered a modest lunch buffet and refreshments during the breaks.

Similarly to past symposia, we were proud to welcome an excellent line-up of speakers from various backgrounds: John O’Doherty (Caltech, USA)- a pioneer in computational neuroscience of reinforcement learning – presented his findings on the systems neuroscience of experientially and non-experientially shaped representations of stimulus- or action-outcome contingencies. Over the last decade, he made fundamental contributions to human decision neuroscience, leading to a better understanding of the key concepts underlying learning and decision theory. Our second speaker Joshua Buckholtz (Harvard University, USA) presented fascinating new findings in the field of social decision making. Joshua gained recognition for his work on the neural underpinnings of psychopathy, particularly the role of the frontal dopaminergic reward circuits during antisocial behavior. In his most popular studies, his lab used a mobile fMRI-scanner in order to examine the brains of violent incarcerated offenders in United States’ maximum-security prisons. These studies, as well as some more recent follow ups, were part of his extraordinarily inspiring talk.

Our third speaker, Judith Burkart, showed the audience a very different approach to social decision making. Judith became distinguished for her work on the diversity of social behavior in monkeys, particularly marmosets (Callitrichidae). At the symposium, she presented recent studies arguing that the collective breeding in marmosets, which may have evolved due to unfavorable conditions in their natural habitats, caused a shift towards a highly sophisticated social cognition. Her talk received great interest from students and visiting scientists alike, highlighting the importance of comparative research. Finally, Christian Ruff’s talk on the neural mechanisms of social decision making was a real highlight. Christian’s research is highly regarded in the field of neuroeconomics. Having published side-by-side with Ernst Fehr and Tania Singer, using a number of near-artistically designed experiments, he investigated the role of functional inhibition on social norm compliance. By applying modern brain imaging and stimulation techniques, he gave a fresh impetus to the understanding of the social brain.

Overall, the symposium was a real success. We concluded the day together by having dinner and drinks in the city center of Düsseldorf, which provided an informal atmosphere to talk to our speakers, where the speakers participated in stimulating discussion with the guests. We thank EBBS for their contribution to this year’s symposium, which allowed us to invite John O’Doherty. EBBS made it, again, possible for us to create an intellectually stimulating event as well as a warm, welcoming atmosphere.