

Report of Innovation and Evolution workshop.

The first international workshop on Innovation and Evolution took place at Southampton University, UK on 27-28 April 2007. Thanks to generous funding from the Galton Institute and support from the University of Southampton the workshop was a huge success.

The workshop was well attended with more than 70 people present over two days. Participants came from countries throughout Europe, including Spain, France, the Netherlands, Sweden, Germany, Poland, Switzerland, and from institutions such as Cambridge University, Portsmouth University, University of Durham, the British Museum, University College London, Royal Holloway, and the Max-Planck Institute. A range of fields of research were represented with scholars from archaeology, psychology, primatology, neuropsychology and geography and the combination of representatives from such diverse research areas promoted some fascinating cross-disciplinary dialogue and sparked a number of discussions about potential cross disciplinary research projects.

The first day began, following a short introductory talk by the workshop's main organiser Hannah Fluck, with the first three papers which set the tone for what was an extremely diverse and interesting day of papers. The session was chaired by Dr John McNabb from the Centre for the Archaeology of Human Origins at the University of Southampton. Dr William Davies (Archaeology, Southampton University) spoke about how innovation can be approached in the context of mobile populations, with particular reference to his area of expertise in the later Palaeolithic. This was followed by Dr Gordon Rugg (Computer Science, Keele University) who gave an extremely refreshing powerpoint free presentation looking at some of the ways in which technological innovations might be quantified. Finally Prof Chris Sinha (Psychology, Portsmouth University) explored the themes of time, space, semiosis and cognitive artefacts through his work with the Amondawa speaking people of Amazonia.

After this fascinating start the following session, chaired by Dr Marie Soressi, an Archaeologist from the Max Planck Institute, Leipzig, continued with a little more emphasis on archaeology. Dr Mark Roberts (Archaeology, UCL) gave an insightful presentation about his work at the important Palaeolithic site of Boxgrove in particular exploring the role played by diet and nutrition in the early hominin occupation of northern Europe. Dr Mikolai Urbanowski (Archaeology, Szczecin University, Poland) presented some exciting new data regarding innovative techniques in flint working in the late Middle Palaeolithic. Keeping with flint technology Dr Jan Apel (Executive Director of the Societas Archaeologica Upsaliensis, Sweden) spoke about the spread of new flint knapping techniques across Europe. The session was brought to a close with questions and short discussion before lunch.

The final session of papers for the day was chaired by Dr Mark White (Archaeology, Durham University). The first speaker of the afternoon was Dr Cintia Rodriguez (Psychology, Autonoma University, Madrid) who presented some interesting research into the use of gestures and objects in prelinguistic infants. This prompted some interesting discussions about the role of language in innovative behaviour. Dr Rob

Hosfield (Archaeology, Reading University) spoke about anthropological research he had undertaken into technological skill transmission in a range of different extant cultures looking particularly at the social and material context of this. The final paper of the day was given by Dr. Mimi Haidle (Archaeology, University of Tübingen, Germany) and explored the issue of detecting innovative behaviour in the way in which tools are used, with a particular focus on archaeology but drawing upon a wide range of examples from other fields of research.

The afternoon discussion session, open to all, was chaired by two of the workshop's co-organisers, Laura Basell (Archaeology, Oxford University/Exeter University) and Kathy MacDonald (Archaeology, Leiden University, Netherlands). Discussions were lively pursuing the key themes of language, communication, learning and transmission that had emerged from the day's presentations.

The second day was opened by the workshop's co-organiser, Natalie Uomini (Archaeology, Southampton University), who summarised the topics from the previous day and introduced some potential directions for the day's discussions. The first session chaired by Dr Cintia Rodriguez begun with a paper by Prof Sophie de Beaune (Archaeology, University of Lyon) about the role that research in neurological and cognitive sciences can play in the understanding of technological innovations in the Palaeolithic. This was followed by Dr Andreas Kyriacou (Neuropsychology, University of Zurich) who spoke about innovation and creativity from a neuropsychological perspective. The final speaker of the session was Dr Matthew Pope (Archaeology, UCL) who looked at hominin behaviour in the Middle Pleistocene, in particular at mobility and landscape interaction.

The second morning session was chaired by Dr Farina Sternke, an archaeologist from University College Cork. The first speaker, Dr Ignacio de la Torre (Archaeology, UCL) looked at continuity and change in Neanderthal behaviour in northern Spain. Next Dr Terry Hopkinson (Archaeology, Leicester) explored the role that social networks play in creating, transmitting and maintaining innovations. Finally Prof Alan Costall (Psychology, Portsmouth University) explored in detail some of the ideas concerning affordances and materiality or as he put it 'doing things with things'.

The final session of the conference was chaired by Dr Bill McGrew (Primatology, Cambridge University) and began with a presentation by Dr Lambros Malafouris (Archaeology, Cambridge University) exploring some of the debates surrounding the nature of materiality, human object interactions and intentionality, with a particular emphasis on human evolution. Dr Vasudevi Reddy (Psychology, Portsmouth University) then presented some of her fascinating research into infant communication and objects, looking at some of the ways in which innovative behaviours manifest themselves ontogenetically. The final presentation of the conference was given by Prof John Gowlett (Archaeology, Liverpool University) and included an audience participation experiment looking at the way in which form may be preserved in interpretations by different individuals while scale may not. In particular he considered handaxe shape and scale and the implications of this for human cognitive evolution.

The final discussion was led by Prof Paul Mellars (Archaeology, Cambridge University) and Prof Chris Sinha who began by summing up their observations of the conference. The discussions then opened up to the audience with a particular emphasis on including some of the participants from primatology who had not been able to present papers. There were some fascinating interdisciplinary discussions about the significance of language in the emergence and establishment of innovations as well as some questions about the role that innovative behaviours might have played in hominin cognitive evolution.

A closing wine reception was given at the Centre for the Archaeology of Human Origins where the discussions continuing and many new professional links were forged. It is intended that the proceedings of the conference will be published. A conference building on the success of this workshop is planned for late 2007/early 2008. The organisers are extremely grateful to the Galton Institute without whose generous grant the Innovation and Evolution Workshop would not have been able to take place.