

EHBEA Workshop Report: Applied Evolutionary Anthropology: Darwinian Approaches to Contemporary World Issues

Held September 2011 at the Department of Archaeology and Anthropology, University of Bristol. Organised by Mhairi A. Gibson (University of Bristol) & David W. Lawson (University College London).

Evolutionary anthropology over the last fifty years has improved our understanding of how current environments (both physical and social) and legacies of past selection explain human behavioural diversity. Combining ethnographic, economic and demographic methods, these approaches have provided rich insights into the behaviours of contemporary peoples around the globe. A growing number of evolutionary anthropologists are now using Darwinian theory as a predictive tool to help the people with whom they work, particularly through the design and critique of public policy and international development programmes which seek to change environments and/or behaviour. The purpose of this three-day workshop, jointly sponsored by the European Human Behaviour and Evolution Association, the Galton Institute and the Biosocial Society, was to bring together social science researchers working on these issues with the aim of forming an integrative approach to the question of Applied Evolutionary Anthropology. Over 30 delegates from a variety of disciplines attended workshop, which mixed paper presentations with breakout discussion sessions, and considered both the theoretical and practical issues associated with applied research.

In total, 17 papers were presented, including four invited plenaries from leading researchers in the field: Bram Tucker (University of Georgia), Kate Hampshire (Durham University), Val Curtis (London School of Hygiene and Tropical Medicine) and Ruth Mace (University College London). The following key research themes were discussed during the workshop: **I) Changing co-operative behaviours and subsistence livelihoods:** Bram Tucker (University of Georgia), drawing on field research in rural Madagascar, outlined how frameworks in behavioural economics and cognitive anthropology can be used to translate traditional peoples' behaviour for policy makers, and ultimately lead to conservation and development programmes better designed to coordinate with the objectives and values of local populations. Shakti Lamba (University College London) discussed what cooperative banking and micro-finance schemes in the developing world can learn from current evolutionary studies of cooperation. Florian van Leeuwen (University of Bristol) presented new evidence from experimental psychology that perceptions of threat may increase group-binding morals and conservatism, particularly in men. A finding of broad social relevance when local politics and media may modify perceived threat. Robert Layton (Durham University) reviewed studies of violence in anthropology, considering evidence for our 'natural capacity' for conflict and how changing environments and Westernization may influence human cooperation.

II) Diet, health and lifestyle shifts: Jonathan Wells (Institute of Child Health) discussed how an evolutionary perspective on human life history reveals hidden vulnerabilities, including multigenerational effects, to recent changes in human diet, focusing specifically on the 'twin burden' of malnutrition and overnutrition now facing many populations. Val Curtis (LSHTM) argued that many major global health problems can be traced to adaptive mismatch between ancestral and post-industrial environments, whereby we either over- or under-use evolutionarily novel technologies. As such, health initiatives may be improved by taking into account our evolved motivations and emotions to both avoid new vulnerabilities and harness our most useful drives. Lucie Clech (University of Bristol) described how evolutionary models of parental investment can

provide insight into the causes and consequences of widespread rural-urban migration in the developing world, drawing on detailed field interviews with rural households and urban immigrants in Ethiopia. Caroline Uggla (University College London) considered how evolutionary models might increase our understanding of patterns of sexual-risk taking in the context of HIV and wider mortality risk factors facing many contemporary populations in Sub-Saharan Africa.

III) Reproductive technologies and family structures. Alex Alvergne (University College London) presented new research on the roles of social learning, social diffusion and individual characteristics on the uptake on modern contraceptive technologies in rural Ethiopia. Alejandra Núñez de la Mora (Durham University) reported the results of a qualitative analysis of shifting breastfeeding norms in consecutive generations of Bangladeshi immigrants in London, and argued that culturally tailored health interventions should acknowledge the role of grandmothers and help women negotiate family relations in the post-natal period. Craig Roberts (University of Stirling) discussed several examples of applied evolutionary psychology; such as new research confirming that use of the contraceptive pill may have hormonal consequences altering patterns of mate choice and relationship stability. Curtis Atkisson (University of Missouri) presented research testing multiple evolutionary predictions regarding the impact of kin on fertility patterns in Matlab, Bangladesh; emphasising the potential for kin to both act as a source of instrumental support and compete for available resources. Susanne Huber (University of Vienna) discussed the role of socioeconomic status on family formation in developed countries and the need for social policy to enable couples to effectively combine employment and parenthood. Rebecca Sear (Durham University) used advanced statistical methods to demonstrate previously unrevealed costs of reproduction on maternal health in rural Gambia, and cautioned that improved methodological sophistication is required in many areas of anthropology if we are to guiding successful social policy.

IV) Assessing impacts of development intervention and engaging with policy makers: Mhairi Gibson (University of Bristol) discussed the potential for evolutionary anthropology to improve the design of development initiatives by predicting the often unintended consequences of narrowly focused vertical interventions. Illustrating this point, Mhairi presented research on the impact of improved water supplies that have improved maternal health and child survival in rural Ethiopia, but are also associated with increased resource competition within families, stimulating new patterns of out-migration. Kate Hampshire (Durham University) considered convergence between critical frameworks in medical anthropology and evolutionary anthropology, and drawing on her own experience of working with NGOs on child malnutrition programmes in Niger, how these perspectives may lead to better targeted interventions. Finally, Ruth Mace (University College London) provided a broad discussion of the sociological and practical reasons that make academic engagement with policy makers difficult, and how these barriers might be overcome by improved research design strategy and dissemination practice. This theme was further explored during several discussion sessions throughout the workshop, with wide agreement that the application of Darwinian perspectives to contemporary world issues presents an exciting and critical step forward for evolutionary anthropology.