

ELAINIE ALENKÆR MADSEN

- Nationality: Danish
- Place of Birth: Rio, Brazil

EDUCATION AND RELEVANT EMPLOYMENT

- 2010-present Post-doctoral researcher, Centre for Cognitive Semiotics, Lunds Universitet
Comparative studies of (i) contagious yawning in children and young chimpanzees
(ii) children's and chimpanzees' understanding of communicative signs
(iii) human and chimpanzee understanding of non-manual pointing
(iii) human, chimpanzee and canid susceptibility to contagious yawning
- 2004-2010 PhD Psychology, University of St Andrews, UK
Supervisors: Prof. Klaus Zuberbühler and Dr. Juan-Carlos Gómez
Part-time PhD funded by a teaching grant, involving 12 weekly hours of undergraduate teaching one semester per year.
Title: Attention Following and Nonverbal Referential Communication in Bonobos (*Pan paniscus*), Chimpanzees (*Pan troglodytes*) and Orangutans (*Pongo pygmaeus*).
Humans frequently use referential gestures, such as pointing, which direct the attention of recipients to aspects of the environment. A distinction is typically made in human development between imperative and declarative gestures, with declarative gestures appearing later, and being associated with the emergence of a number of complex cognitive abilities. Observations of referential gestures in non-human primates have been limited to captive subjects interacting with humans, language-trained or human-raised apes and when subjects call attention to aspects of their own bodies. My research has shown that chimpanzees and bonobos are capable of directing the attention of conspecifics to distal locations in a way that is more declarative than imperative, and suggests that the paucity of observed referential behaviours in apes is due to the inconspicuousness and multi-faceted nature of the behaviours.
- 2002-2003 Max Planck Institute for Evolutionary Anthropology. Leipzig, Germany
Started a PhD on theory of mind in wild chimpanzees; abandoned due to civil war in the country of the field site. Reviewed academic papers, analysed data re paternity recognition by wild chimpanzees.
- 2000-2001 UCL, Centre of Economic Learning and Social Evolution, UK
Explored whether human behaviour is mediated by the evolutionary principle expressed in Hamilton's rule (1964). The theory states that every altruistic behaviour has an in principle measurable, actual or potential cost for the donor, and benefits for the recipient. For this purpose, I collected cross-cultural experimental data in London and South Africa regarding the degree of investment people were willing to devote, given that the benefits were donated to individuals of varying degrees of relatedness.
- 1999-2000 MSc Evolutionary Psychology. Distinction. University of Liverpool, UK
Supervisor: Prof. Robin Dunbar
Courses: primate behaviour, cognitive evolution, sociobiology, statistics, methodology
Thesis: A Meeting of Minds? The Potential for a Theory of Mind in Dolphins
Exploration of the capacity of dolphins to hold separate representations of their own knowledge and others' (theory-of-mind reasoning). Dolphins exhibit complex neuroanatomical characteristics and advanced communication and cognition: qualities that render dolphins a potential contender for a non-human theory of mind.

- 1996-1999 BSc Psychology and Zoology. Honours. 2.1. University of Nottingham, UK.
Social, biological, cognitive, and developmental psychology; biological anthropology; evolution and behaviour; primatology; and animal behaviour.
Thesis: age and fertility related changes in fluctuating asymmetry in women.
- 1995-1996 Danish A-level equivalent. Taken to supplement art A-levels with science A-level courses. Lyngby, Denmark. Psychology, biology, chemistry, mathematics.
- 1990-1993 Danish *Gymnasium* (A-level equivalent), Art-side, Marie Kruse Skole, Farum, DK.
Danish, English, German, Spanish, Latin, history, music, religion, sociology, art, ancient history, geography, biology, physics/chemistry/mathematics.
Thesis: Cultural universals and catharsis in literature. Distinction.
- 1981-1990 GSCE equivalent, Stenvadskolen, Farum, DK and Jakarta International School, Indonesia

TEACHING

- 2004-2009 Research methods and statistics, School of Psychology, University of St Andrews.
Teaching classes of 240-350 undergraduates; twelve weekly hours, one semester per year.
Administration; design and delivery of teaching materials, manuals, assessments, and exams; one-to-one student tutoring. Student and supervisor feedback: excellent.
- 2008 Senior-honours class on animal communication, University of St Andrews
- 2006 Seminars on effective communication for medical students, University of St Andrews
- 1995 English (12-18 year olds) Tanjung Selor, Borneo, Indonesia

TUTORING

- 2007-2008 Advisor for 4th-year honours psychology research project, University of St Andrews
- 1989-1995 Part-time tutoring of child with attention deficit hyperactivity disorder

GRANTS SECURED

- 2004-2009 University of St Andrews PhD teaching grant (£ 55,000)
- 2008 Bursary award for attendance at International Primate Society Conference (£ 210)
- 1999 Grant for dolphin theory of mind research (£ 900), School of Biological Sciences, University of Liverpool

PUBLICATIONS

- Madsen, E.A., Zlatev, J., Persson, T., Sayehli, S., Sonesson, G. (*in prep*). A developmental increase in susceptibility to contagious yawning in chimpanzees: an expression of empathy?
- Madsen, E.A., Zuberbühler, K., Gómez, J.C. (*in prep*). A test of the social attention hypothesis: Chimpanzees (*Pan troglodytes*) accord & receive attention following according to social dominance.
- Madsen, E.A., Zuberbühler, K., Gómez, J.C. (*in prep*). Intra-specific showing & pointing behaviours in bonobos (*Pan paniscus*) and chimpanzees (*Pan troglodytes spp.*) but not orangutans (*Pongo pygmaeus*).
- Madsen, E.A., Tunney, R.J., Fieldman, G., Plotkin, H.C., Dunbar, R.I.M., Richardson, J-M., McFarland, D. (*in prep*). Proximate cues mediating altruistic kin investment: A cross-cultural experimental study.
- Madsen, E.A., Dunbar, R.I.M., Call, J., Feld, H., Tschudin, A. (*in prep*). Mental state attribution in dolphins (*Tursiops truncatus*).
- Madsen, E.A. (2009). Bonobos. *Feedback*. Association for the Study of Animal Behaviour.
- Madsen, E.A., Tunney, R.J., Fieldman, G., Plotkin, H.C., Dunbar, R.I.M., Richardson, J-M., McFarland, D. (2007). Kinship and Altruism: A Cross-cultural Experimental Study. *British Journal of Psychology*, 98 (2), pp. 339-359.

CONFERENCE POSTERS AND PRESENTATIONS

Madsen, E.A., Zlatev, J., Persson, T., Sayehli, S., Sonesson, G. (2011). A developmental increase in susceptibility to contagious yawning in chimpanzees: an expression of empathy? Talk to be delivered at Protolang 2, 19-21 September 2011, Toruń, Poland.

Madsen E.A., Zuberbühler, K., Gómez, J.C. (2008). Attention Directing in Bonobos (*Pan paniscus*), Chimpanzees (*Pan troglodytes verus*) & Orangutans (*Pongo pygmaeus*). Poster presented the Association for the Study of Animal Behaviour 2008 Spring Meeting.

Madsen, E.A., Zuberbühler, K., Gómez, J.C. (2008). Attention directing in Bonobos (*Pan paniscus*), Chimpanzees (*Pan troglodytes verus*) & Orangutans (*Pongo pygmaeus*). Departmental Psycholoquia, University of St Andrews.

Madsen, E.A., Tunney, R.J., Fieldman, G., Plotkin, H.C., Dunbar, R.I.M., McFarland, D. (2002). Nepotistically Inclined? A Cross-cultural Experimental Study of Human Kinship and Altruism. Invited talk at Max Planck Institute for Evolutionary Anthropology.

PUBLIC UNDERSTANDING OF SCIENCE

2009 Primate communication and social cognition. National Science week

2008 Presentation of the exhibit 'The primate roots of human language'. National Science Week

LANGUAGES

Danish and English (fluent); Swedish, Norwegian, German, and Spanish (conversational)

PROFESSIONAL AFFILIATIONS

Scottish Primate Research Group, Centre for Social Learning and Cognitive Evolution, Association for the Study of Animal Behaviour, The Primate Society of Great Britain

SKILLS AND INTERESTS

Travel, photography, ethics, philosophy, mountaineering, squash, running, canoying, and rollerblading.