RELATIONSHIP ASSESSMENT THROUGH EMOTIONAL MEDIATION

by

FILIPPO AURELI\textsuperscript{1,2) and COLLEEN M. SCHAFFNER\textsuperscript{3,4)}

(\textsuperscript{2} School of Biological & Earth Sciences, Liverpool John Moores University, UK; \textsuperscript{3} Department of Psychology, University College Chester, UK)

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\textbf{Summary}

Social relationship is a concept that links the observable social interactions between group members to the inferred group social system. Social relationships allow animals (as well as the human observers) to predict the actions and responses of their partners and therefore guide their own. Social relationships can also be described as investments that benefit the individuals involved in them. Some benefits simply require stable association and some level of mutual tolerance, whereas others depend on the establishment of more fully developed social relationships. The variation in the quality of social relationships leads to a great flexibility in the frequency and quality of interaction with various group members and with the same individual over time. A key issue is therefore to understand the proximate mechanisms underlying such flexibility since individuals need to be able to assess relationship quality in order to maximise the benefits that social relationships provide. Assessment of social relationships should be based on the information contained in the various interactions that the partners exchange. Assessment should therefore require bookkeeping of the various interactions, computation of their relative frequencies, and conversion of their quality and information associated with them into common currencies. We propose emotional mediation as a possible mechanism that fulfils such requirements and provides the individual with a

\textsuperscript{1}) Corresponding author: School of Biological & Earth Sciences, Liverpool John Moores University, James Parsons Building, Byrom Street, Liverpool L3 3AF, United Kingdom; e-mail address: f.aureli@livjm.ac.uk
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timely assessment to guide its social decision. Emotions are viewed as intervening variables that result from the integration of the information contained in the various interactions between two partners. Before presenting evidence for relationship assessment through emotional mediation, we define the concept of emotion in animals and provide evidence for measuring relevant emotions in non-human primates. Then, we present four examples obtained by combining findings from multiple studies. The examples provide evidence for emotion resulting from information contained in the interactions exchanged by the partners and for emotional differences being at the basis of the variation in social interactions. Thus, animals may appreciate variation in their social relationships through emotional mediation. This is a promising avenue to disclose the proximate mechanisms of relationship assessment and we suggest new lines of research to gather further evidence for the role of emotional mediation.

Introduction

Gregarious animals form social relationships with conspecifics that they meet repeatedly. This situation certainly occurs in group-living species, but it may also arise between solitary animals such as territory neighbours. Social relationships can be established in species capable of individual recognition as long as earlier interactions between two individuals affect their subsequent interactions. These conditions are well documented in many diurnal primates in which group members interact with one another repeatedly over the course of relatively long lifetimes and whose groups consist of networks of individualised social relationships, each of them having its own history and therefore being unique (Cords, 1997). Here we will focus our attention on diurnal non-human primates, but the issues we raise also apply to other species living in similar conditions.

Social relationship is a concept that links the observable social interactions between group members to the inferred group social system. At the proximate level, a relationship can be described in terms of the content and quality of the interactions between two individuals and the relative frequencies and patterning of those interactions over time (Hinde, 1979). Each partner in a relationship is involved in other relationships as well, so that each relationship is part of a network of relationships, or a social system. This system can be described in terms of the properties and patterns of the constituent relationships. The resulting framework captures the dynamic nature of social interactions, social relationships and social systems. It further implies that the links between the three elements are not only bottom-up (i.e. from interactions to relationships to social systems), but also top-down. Therefore, not