



Commentary

Liberating primatology

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The study of nonhuman primates developed separately from that of other organisms.

–Alison Richard, 1981

Among the many zoologies that have emerged over the last hundred years or so, primatology is astonishing in its reach and breadth of influence on other sciences and people's thoughts. It is noteworthy for the cultural imprint it carries and the forceful reactions its practice engenders. Primatology is also a contested site for various disciplines and epistemologies. In addition, the field is remarkably place-specific in ways that are often unnoticed. We argue that a mainstream recognition of primatology's diversity and the various ways in which culture impacts the practice of this science can help to liberate the field from attempts to impose particular methodologies, outlooks and theoretical frameworks on the discipline, and enable the field to make even greater contributions to human understanding.

Primatology, or the study of nonhuman primates, occupies a unique place among the biological sciences. 'A half-breed discipline' as Whitten (1988) so aptly put it, it gathers within its fold a number of areas of study (ranging from morphology and molecular biology to behavioural psychology and animal studies) that spill over disciplinary boundaries in the approaches and techniques they employ. For example, studies on primate cognition and social behaviour routinely borrow theoretical paradigms from social psychology, research on monkey epidemiology is largely fuelled by human health concerns, and investigations into human–primate conflict interactions wield ethnography as a tool that permits a more in-depth understanding of the interface. Furthermore, studies on primates wrestle with the capacities of their study species to display rich and fulfilling moral and emotional lives, their sentience, languages and cultures. This also raises contemporary concerns on the personhood of primates and the implications of current understanding on the ethics of animal experimentation. That these research perspectives are uncommon for a zoological discipline is vividly brought home by a comparative view of other taxonomic zoologies. Ornithology, herpetology, cetology and even elephantology are more than respectable contenders in terms of number of practitioners or degree of specialization, and yet few branches of zoology can match the diversity of research or the multidisciplinary nature that are characteristic of primatology.

Why is it that primatology inspires such diversity in thoughts and passions regarding the animal taxa under study? Over the history of mankind, a wide variety of people, from philosophers and historians to poets, naturalists and scientists, have observed, described, eulogized and mocked primates through their writings. Certain groups of animals have been at the forefront of discussions that deal with issues beyond their zoological identity—for instance, companion and farm animals tend to take centre stage in debates on animal rights and welfare; yet, few animal taxa can compete with primate species in terms of the scientific attention that they have received from human beings. Most animal taxa are studied because they are good model systems to understand the expression of certain behavioural patterns (Lorenz and Tinbergen's classic experiments on the greylag goose to investigate instinctive behaviours immediately come to mind) or because their life cycles, physiology or behaviours are fascinating or unusual in themselves (as in von Frisch's investigations to understand communication among bees or Gilbert White's fascination with earthworms). However, academic interest in primates, at least in Western science, goes beyond their zoological categorization as 'animals' and appears to be inextricably linked to their status as humanity's ancestral relatives. By virtue of their biological connection to humans, primates occupy an anomalous position among animal species, one that is neither fully human nor fully animal, and this chimeric identity overwhelmingly defines their importance for science. The scientific import of primates is made abundantly clear by Adolph Schultz, one of the founding fathers of primatology, in his writings on primate anatomy and human evolution. Schultz's studies reflect a departure from the earlier, almost prurient, curiosity about human-like primates to an acceptance of humanity's taxonomic position amongst the primates, and he writes (1936):

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The scientific investigation of anthropoid apes had its inception at the close of the seventeenth century, when Tyson (1699) published his anatomical description of the chimpanzee. All the early students of the ‘man-like apes’ were greatly impressed with the similarity to man of the great apes. Their writings and, particularly, their illustrations emphasize and frequently exaggerate the *human* qualities of the *apes*. Beginning with Darwin, Huxley and Haeckel this emphasis became reversed so that most modern comparative investigations concern themselves with the *ape-like* qualities of *man*. This last and extremely productive period of research on higher primates has somewhat neglected the at least occasionally needed emphasis on the *specifically human* characters of *man*.

Given the centrality of the evolutionary connection, it is unsurprising that anthropology has exerted a great deal of influence on the development of primatology (Sussman 2011). Reconstructing the evolutionary trajectory of humans has remained an important concern of primatology and most studies on primate behaviour and ecology implicitly (or explicitly) acknowledge this objective.

Primatologists have long acknowledged that primatology is enmeshed with anthropology. Hooton (1955), with his famous remark, ‘Paraphrasing some Roman or other we anthropologists say: *Primatus sum, nihil primatum mihi alienum puto*, which, being translated, is I am a primate; nothing about primates is outside of my bailiwick’, was perhaps the earliest to admit this. However, the success of using the primatological lens to understand the evolutionary origins of human social behaviour is highly contested (Strier 2011). While some authors perceive a deep chasm of interests between anthropology and primatology (Richard 1981; Rodman 1999), others are vehement about the continuing relevance of primatology for the field of anthropology (Dolhinow 2002; Yamagiwa 2010; Strier 2011; Riley 2013). Rodman (1999) contends that the field of socio-cultural anthropology that dominates the discipline of anthropology embraces a view that promotes ‘different cultural icons for different folks’. Primatology and the attendant studies of behaviour and anatomy that are concerned with the evolutionary heritage of humankind are therefore of no interest to socio-cultural anthropologists, and this has resulted in a ‘wide epistemological abyss between socio-cultural anthropology and primatology’. Strier (2011), on the other hand, points out that although primatology was initially associated with anthropology as a means of understanding humans, primatologists soon began incorporating a more biological approach to studying behaviour and this ‘pulled primatology away from its anthropocentric foundations’. The current trend of conducting comparative studies of different primate populations is strengthening ‘contemporary primatology’s connection with anthropology’, as documenting variation in human societies has always been the primary concern of anthropology and primatology is fulfilling this goal through its interest in understanding intra- and interspecific variation among primate species (Strier 2011). Riley (2013), in her spirited defence of contemporary primatology, argues that primatology has always had a deep affinity to anthropology and that the more prominent influences of this association can be seen in the new self-reflexivity that earmarks primatology and in the increasing engagement with the human–environment interface within the discipline.

The multifaceted nature of primatology is perhaps best represented by Donna Haraway’s *Primate Visions* (1989), which is easily the most influential critique of primatology to be published. Haraway posits that primatology helps explore how race and speciesism impact our constructs of nature, and illustrate the biopolitics that drive Western science. Her tome takes a sweeping look at the history of primatology, beginning with the establishment of primate colonies for laboratory research by Euro-Western colonizers in the early 1920s to the development of Western primatology following WWII and the remarkable impact several women primatologists have had on the evolution of the field. She analyses the careers of several iconic primatologists to show that alternate readings of their work construct narratives of the dominance of man over nature that are bolstered by scientific rhetoric to retain the hegemonic position of Western colonizers over third-world nations and men over women. Haraway’s deconstruction of primatology forces a deeper look at the actions and findings of many field primatologists and demonstrates how institutional, racial and sexual politics colours and mediates the practice of science.

Haraway and others (see Rees 2001; McGrew 2009; Fuentes 2011) call attention to a puzzling contradiction in Western primatology, namely, that it is built on an acknowledgement of the shared ancestry of primates and humans, and yet ‘anthropocentric perceptions have situated humans at one extreme of the human–animal continuum and therefore apart from the hundreds of other primate species studied by primatologists’ (Strier 2011). The careful maintenance of distance between human and nonhuman primates appears inextricable from the practice of Western primatology; even the staunchest supporters of primate personhood are very conscious about the division between humans and their nearest relatives (Fouts 2000).

The distance between human and primate is not necessarily a part of all primatologies. Unlike Western primatology that sees humans as evolutionarily superior species and is very much concerned with maintaining this status of humans *vis-à-vis* other animals, establishing the human–animal divide is generally of little importance in non-Western primatologies. Japanese primatology views primates and humans as related species that are part of an interconnected network of life in the ecosystem. The impact of this worldview is most keenly felt in the way Japanese primatology interprets primate behaviour and social relations among primate individuals (Imanishi 1960). Monkeys are presumed to have rich and complex social lives, and

hence anthropomorphism, or ascribing human-like characteristics to monkeys, is not seen as a threat to scientific rigor in Japanese primatology, as it is in much of Western primatology. Although early Japanese primatological studies did have explicit anthropological frameworks, here the acceptance of the evolutionary continuity of life did not lead to an emphasis on the human–animal divide; instead, the impetus has been to acknowledge ‘human-like characteristics in animals’ (de Waal 2003). This helps to explain why the concepts of kinship networks and cultural traditions in primates were propounded by Japanese primatologists long before they were first described in the West (Asquith 1984, 1986; Takasaki 2000).

Primateology in Japan developed independently of Western primatology and this may account for much of the differences in the practice of the science in Japan and the Euro-Western world (Asquith 1984, 1986; Takasaki 2000; de Waal 2003). However, regional primatologies in other parts of the world, although they developed from Western primatology (and were strongly influenced by colonial science), have gone on to form their own and distinctly separate traditions of doing science. For example, primatological research in many Asian and African countries has no anthropological antecedents (Fuentes 2016). In Vietnam and Brazil, two important primate habitat countries, the field is most closely allied with the disciplines of biology/zoology, and primate conservation is an important agenda for research (Bicca-Marques 2016; Hoàng 2016). In India, too, primatological studies emphasize the zoology of the species, i.e. their ecology, demography and conservation. The genesis of anthropology as an academic discipline in India in the 1900s was deeply influenced by sociology and the impacts of this are visible even today in the socio-cultural anthropological tradition that dominates the field in the country (Srinivas and Panini 1973). In comparison, ethology is a much younger discipline, dating back to the 1950s, and the study of primates and other animals, when it began, was led by zoologists and comparative psychologists. Early primatological studies by Indians were mostly in the areas of anatomy and physiology and do have stated anthropological agendas (Subba Rau and Sahasrabudhe 1930; Ayer 1941; Ramaswamy 1957; Seth 1964). Yet, the larger orientation of the studies remains firmly zoological. Note, for example, Ramakrishna and Prasad’s paper (1967) on the reproductive physiology of the male slender loris that begins as: ‘Our knowledge of the reproductive phenomena in lower primates, especially the Lemuroidea is scanty. While extensive work has been done to elucidate the factors regulating reproductive cycles in naturally occurring mammalian population of rodents, nearly the same attention has not been paid to primate reproduction. It is essential that this gap in our knowledge be filled as a link to the understanding of reproductive processes in higher primates and man.’ Post-independence (i.e. post-1947), anthropological references became more infrequent and by the 1960s,¹ Indian primatology was dominated by studies on the ecology, behaviour and demographics of primate populations (Southwick *et al.* 1961; Southwick and Siddiqi 1966; Singh 1966; Rahaman and Parthasarathy 1969; Singh and Pirta 1978). Even when researchers conspicuously located themselves within the disciplinary boundaries of anthropology, their primate studies had a distinctively behavioural and conservation slant (Seth and Seth 1983, 1993; preface and chapter 3 in *New Perspectives in Anthropology*). That trend continued; today the main themes of research in Indian primatology include social behaviour, population dynamics, feeding ecology and the conservation status of Indian primates (Singh *et al.* 2011) (see footnote 1).

Apart from differences in worldviews regarding the place of humans and animals in this world, another factor that may have played a significant role in bringing about variations in primatological schools are the primates themselves. Primatology is not just about how and why humans study primates, but also about primates and the human–primate interface, and living alongside the primates one studies brings about a unique perspective to one’s understanding of primate biology and behaviour. These experiences are embedded in the cultural context of primate and human lives and may thus contribute to distinctive philosophies regarding the function of primatology or the priorities of research (Fuentes 2011). It appears almost inevitable that primate management and conservation would be a critical objective that drives research in many primate habitat countries. The long-standing Urban Monkey Program in Brazil was set up by Brazilian primatologists in 1993 to address primate conservation, while the ‘Protect Our Guardian Angels’ campaign was launched in 2009 to engage with the public community and seek their help in protecting howler monkeys from the impacts of the yellow fever outbreak (Bicca-Marques and de Freitas 2010; Jerusalinsky *et al.* 2010). Primate rescue centres are the cornerstone of primate research activities in Vietnam and population dynamics, and repeated conservation surveys form a significant part of research activities for Indian primatologists (Singh *et al.* 2011; Hoàng 2016).

In contrast, field research in Western primatology is often conducted for short terms in non-Western primate habitat countries and this certainly impacts the way Western primatologists look at primates, the purpose of primatology and human–primate relations. Interactions that occur between primatologists and their species of interest also vitally impact the course of research (Vitale and Pollo 2011), and locating oneself with respect to the species and the research has enormous implications for the practice of the science. For example, in a study on human–primate interactions in Brazil, Brazilian primatologists

¹ Singh *et al.* (2011) consider the 1960s to be the birth of Indian primatology, for this is when field primatology came into its own in the country. They acknowledge this to be largely due to the efforts of many Western primatologists such as Charles Southwick, Paul Simonds, Phyllis Jay Dolhinow, Frank Poirier and Steven Green, who conducted pioneering ecological and behavioural studies on various primate species in India.

showed that, contrary to received wisdom, cultural familiarity with and affection for primates may actually lead to undesirable consequences for humans (Rodrigues and Martinez 2014). Similarly, Indian primatologists drew upon cultural insights to argue that religious inhibition rather than adherence to wildlife laws prevented Indian farmers from physically harming crop-raiding macaques (Saraswat *et al.* 2015). Such perspectives oftentimes are particular to certain cultural contexts and may not be easily accessible to non-native scientists/primatologists (Mito and Sprague 2013; Radhakrishna 2017).

We should be cautious about views that perpetuate Occidental versus Oriental differences; yet, the connection between anthropology and primatology in Western science points to interesting differences between Western and non-Western views of human relations with animals. Western perspectives are built around the central significance of human beings; non-Western worldviews, on the other hand, such as those dominated by Buddhist, Hinduism or Shinto faiths, see human beings as one part of a vast and interconnected ecosystem. The centrality of human beings emphasizes an anthropological role for primate studies in Western primatology, whereas it is downplayed in other primatologies.

de Waal (2003) proposes that ethology, far more than other branches of natural sciences, highlights the power of cultural preconceptions in mediating our practice of science. The history and practice of primatology testifies that culturally mediated viewpoints strongly impact the practice of a science and that 'how science is done largely depends on the culture in which it is practised' (Iaccarino 2003). Non-Western primatological approaches often present concepts regarding primate behaviour and ecology that initially appear antipodal to Western primatological thinking. Yet, many of these perspectives have gained value and acceptance over time (de Waal 2003). Unfortunately, the value of regional primatologies or the strength of insights that they bring to the larger discipline has been largely ignored in mainstream/Western primatology. Japanese primatology has attracted some attention for the contrast it offers to Western primatology; however, except for Haraway's *Primate Visions* (1989), Strum and Fedigan's *Primate Encounters* (2000), and de Waal's (2003) cogitations on Imanishi and cultural bias in science, there has been little discussion in the discipline regarding other regional primatologies or what they offer to our understanding of primate ethology. The dominant paradigm, and one that is deeply entrenched in the discipline, continues to be that of the Western notion of doing and understanding science (Yamamoto and Alencar 2000).

Primateology has moved a long way from its humble beginnings in primate anatomy and physiology to now include the multidimensional aspects of human–primate interactions as a legitimate part of the discipline's focus (Fuentes and Hockings 2010). From a 'new physical anthropology' that started including genetics in its toolkit to a new 'eclectic primatology' that refused to be bound by the 'traditional division of knowledge', the field has more than lived up to its promise of providing more than just an understanding of man (Washburn 1951, 1973). The hallmark of primatology has been its ability to integrate and consolidate various theoretical approaches and methodologies over time, be they anthropological imperatives, socio-biology, feminist theories or ethics (Sperling 1991; Fedigan 1997; Strum and Fedigan 2000; Malone *et al.* 2010). Can we push the envelope a little more to embrace unreservedly the impacts of cultural differences in practicing primatology and accept the different insights this brings to the field? A mainstream acceptance of this can only serve to strengthen the quality of science in primatology. A way forward in this direction lies in the emergent discipline of ethnoprimateology. With its emphasis on the social and cultural contexts of human–primate interactions, as much as the ecological, ethnoprimateology acknowledges that humans and primates are co-participants in shared social spaces whose ecologies mutually impact each other (Lee 2010; Riley *et al.* 2011; Fuentes 2012). With their diverse human communities and concomitant multiculturalism, most primate habitat countries are fertile ground for ethnoprimateological research, wherein questions about human–primate interconnections can be uniquely addressed by regional primatologists (Hoàng 2016; Radhakrishna 2017).

There are different ways of practicing science and few fields evidence this more clearly than primatology. As a discipline, primatology is caught between anthropology and biology, between anthropocentrism and naturalism, between seeing primates as resources for understanding humanity and seeing them as agents worthy of understanding in their own right. Ultimately, the strength of primatology lies in its diversity. It should be liberated from attempts to reduce it to any particular purpose, place or epistemology.

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