

Different species, one theory: reflections on anthropomorphism and anthropological comparison

Matei Candea

Abstract

This paper compares recent anthropological accounts of animist and perspectivist ontologies with evolutionary explanations of animal behaviour in contemporary behavioural ecology. It argues that some unexpected echoes between these two very different ways of encountering non-humans raise a set of fascinating issues both ethnographic and theoretical. On the ethnographic side, thinking of behavioural ecology as akin to a ‘naturalist perspectivism’ illuminates some of the complex ways in which the discipline deals with worries about anthropomorphic projection. On the theoretical side, the comparison raises some questions about the ease with which us/them contrasts associated with the recent ‘ontological turn’ in anthropology find themselves echoing contrasts internal to western philosophical and scientific debate. The resulting problem of mirroring (the concern that ‘others’ may be called upon to play the role of an anti-‘us’, rather than encountered on their own terms) is in turn considered as an analogue of the scientific problem of ‘anthropomorphism’, and some potential responses to both are considered.

Keywords

Perspectivism, evolution, comparison, ontology, epistemology

CONTRASTS UPON CONTRASTS

A primatologist colleague at my anthropology department recently introduced evolutionary anthropology to a class of students by noting that, while evolutionary anthropologists may work with different species (baboons, chimps or humans), they share just one theory: the theory of evolution. The implied contrast here was with social anthropologists, who traditionally only work with one species, but have many different theories.

I was struck by the echo between this contrast and the lecture on Eduardo Viveiros de Castro's model of Amerindian perspectivism (Viveiros de Castro 1998), which I had given earlier that week to a different group of students. Viveiros de Castro argues that whereas Euroamerican ontology postulates a single nature and many cultures, Amerindians live in a world characterised by a single 'culture' or viewpoint, shared across many different natures: to take a somewhat simplified example, humans, jaguars and peccaries all see themselves as 'people', living in villages, hunting peccary and in danger of predation by jaguars, except that for the peccary-people the humans are jaguar while for the jaguar-people the humans are peccary. These differences are not the effect of multiple cultural perspectives on one natural reality (as is the case in Euroamerican ontology), but rather multiple embodied worlds which share one cultural perspective (in which the perceiver is human, hunts peccary, drinks beer and is killed by jaguars).

What particularly struck me about this chance encounter between my colleague's contrast (one species, many theories; many species, one theory) and Viveiros de Castro's Amerindian perspectivism, was that evolutionary scientists are, as it were, *my* Amerindians: in recent years, I have been undertaking a multi-sited ethnographic study of the science of animal behaviour (Candea Forthcoming; Candea 2010).

The coincidence between these two contrasts will be the starting point of this article's experiment: what if, reversing the recent tendency in anthropology to start from a radical contrast between Western and non-Western ontologies, one were to make analogies across that divide, and distinctions within one of its branches? What if we asked about the ways in which evolutionary explanations of behaviour are like Amerindian perspectivism and unlike other varieties of 'Euroamerican naturalism', such as, for instance, studies of animal cognition or sociocultural anthropology?

This suggestion is intentionally paradoxical, since western scientists who study animal behaviour are usually taken to be at the very core of Euroamerican naturalism, the purported polar opposite of Amerindian perspectivism. Focusing on what it means to 'know' in these two contexts, for instance, Viveiros de Castro highlights a sharp opposition:

Shamanism is a form of acting that presupposes a mode of knowing, a particular ideal of knowledge. That ideal is, in many respects, the exact opposite of the objectivist folk epistemology of our tradition. In the latter, the category of the object supplies the telos: to know is to objectify [...] The form of the other is *the thing*. Amerindian shamanism is guided by the opposite ideal. To know is to personify, to take on the point of view of that which must be known. Shamanic knowledge aims at something that is a someone — another subject. The form of the other is *the person*. (Viveiros de Castro 2004a:468)

This is a pre-print of Candea M. 2012. Different Species, One Theory: Reflections on Anthropomorphism and Anthropological Comparison. *Cambridge Anthropology* 30: 118-135.

This contrast, interestingly, echoes one drawn within western animal science itself by sociologist Eileen Crist. Crist (1999) opposes the older approach of late 19th and early 20th century observers of nature, with that of post-1970s sociobiologists who seek for evolutionary explanations of behaviour:

For a naturalist like Fabre, “objective knowledge” is a personal achievement, stemming from an intensity of immersion that grounds his authority to speak for the insect world with which he has become intimately acquainted. For sociobiologists [...] “objective knowledge” is accredited by interobservational agreement, involving emphasis on quantitative information, procuring observational data, and producing general claims that are founded in impersonal measurement. The naturalist wants to glimpse inside the animal’s experiential world. The sociobiologist wants to submit claims that any behavioural scientist can verify. (ibid: 146)

Both of these contrasts pick out much that is true and relevant about the ways contemporary scientists approach animal behaviour. And yet, I will argue that, of the two models of animal science proposed by Crist, it is ‘sociobiologists’ rather than ‘naturalists like Fabre’ who are in some crucial and surprising ways, the closer fit with what Viveiros de Castro describes as Amerindian perspectivism.

This experiment with anthropological comparison has two aims. The first is ethnographic: seeing evolutionary accounts of behaviour as a kind of ‘naturalist perspectivism’ sheds new light on the complex ways in which behavioural ecologists manage the question of anthropomorphism. I will argue that these scientists’ rejections of anthropomorphism are not straightforward evidence of a settled ontological schema in which interiority belongs to humans alone (Descola 2007), or of a kind of “species solipsism”. Rather, the issue of what counts as interiority and of what is shared and not shared between humans and non-humans, emerges as a complex empirical question.

My second aim is to reflect on anthropological comparison itself, and particularly on a mode of contrastive argument which, based on ethnographic insights, involves the use of well-known western philosophical dichotomies (such as nature/culture, society/individual, human/non-human) as foils for the account of a radically different possible world, in which these contrasts are differently articulated, reversed or dissolved. As is made clear in the introduction to this special section, and as I will reiterate in the conclusion to the present paper, not all current invocations of ontological alterity proceed in the same way, or draw upon the same kinds of assumptions and commitments. My focus here is principally on a method, which following Viveiros de Castro I will characterise as ‘tactical quintessentialism’. This starts from a radical us/them contrast in order to challenge our ontological assumptions and in so doing, to take theirs seriously – which means leaving them in a state of possibility, without reducing them to false or true statements in our own terms (Viveiros de Castro 2011; see also Walford, this volume; Latour 2009). What is the effect of trying to apply this contrastive method, inwards, as it were, within naturalism itself?

One effect is precisely to highlight the complications which arise around distinctions between ‘us’ and ‘them’. This argument takes off from a previous exchange concerning the notion of taking seriously (Viveiros de Castro 2011; Candea 2011). There Viveiros de Castro made clear that ‘us/them’ distinctions do not necessarily have to map on to familiar contrasts between the West and the non-West, but could be drawn, procedurally, anywhere – this is what distinguishes ‘tactical quintessentialism’ from a kind of ‘closet-culturalism’ (Pedersen, Pers. Com. See also introduction, this issue). I suggested that this explicit unmooring of the notion of taking seriously from geographic determinism

enables anthropologists who are striving to ‘take seriously’ people usually considered to be quintessentially part of ‘us’, to play a specific kind of role: that, precisely of keeping under examination how and to what effect lines are drawn between positions we do and do not take seriously.

In particular, this inward operation highlights the ease with which out-facing polarities can be replicated inward – and vice-versa. This echoes a concern articulated by Viveiros de Castro himself, who notes of his own attempt to render perspectivist multinaturalism in terms of nature, culture, and the like, that

This very crude technique for setting off the distinctive features of Amazonian cosmologies carries the obvious risk of distortion, since it is unlikely that any nonmodern cosmology can be adequately described either by means of such conceptual polarities or as a simple negation of them (as if the only point of a nonmodern cosmology were to stand in opposition to our oppositions). (2004:464)

The worry, in other words, is that the ‘Other’ might be made to stand simply for the ‘anti-West’ (Walford, this volume), and thus be reduced once again to a version of our own concerns, albeit a version that is an *inversion*. This worry about mirroring stalks any mode of argument which deploys radical conceptual polarities between ‘them and us’ in a complex and entangled world, for the simple reason that these polarities so often echo polarities between some of what is then counted as ‘us’ and others of ‘us’ – such as for instance the echoes between Viveiros de Castro’s contrast between objectivist and shamanist epistemology above and Crist’s contrast between objectivity as understood by ‘naturalists’ and ‘sociobiologists’. More radically, Terence Turner charges that Amerindian perspectivism rendered in terms of nature and culture, becomes “a philosophical system not dissimilar from Modern Western speculative idealism” (Turner 2009). One might perhaps reply that while Viveiros de Castro’s account of perspectivism, and speculative idealism, echo each other insofar as they are inversions of the same Western philosophical tenets, they are not the same inversion, insofar as the former works through ethnography – and that difference, the gap which ethnography opens between perspectivism and western speculative idealism, is the source of new insight.

By pointing to internal contrasts which echo external ones, endo-anthropology might help with identifying such ethnographic spaces for new divergence. But I will argue it can also shed analogical light on the problem of mirroring more generally.

BEHAVIOURAL ECOLOGY AND THE PROBLEM OF ANTHROPOMORPHISM

In the above discussion, I have used behavioural ecology, behavioural biology and evolutionary studies of behaviour somewhat indiscriminately to describe my ethnographic¹ object. Some condensed sense of the history of animal behaviour science is necessary here (for a fuller account, see Burkhardt 2005, Crist 1999). Behavioural biology was pioneered under the name of ethology in the inter-war years by Konrad Lorenz and Niko Tinbergen. Unlike its primarily lab-based American cousin animal psychology, ethology studied the physiology and function of animal behaviour, working with whole animals in the wild and under conditions of domestication.

Both disciplines, however, were self-consciously breaking from earlier attempts at a more ‘shamanistic’ epistemology of animal minds. Viveiros de Castro’s contrast thus echoes a polemical contrast internal not only to western folk epistemologies, but indeed to debates within animal behaviour science itself.

Darwin famously inferred beliefs and intentions in his accounts of non-human animals, and his follower George Romanes explicitly articulated a methodology based on what he termed “ejective anthropomorphism”, which systematised the attempt to project oneself into another creature’s point of view (Romanes 1883; Thompson 1994). Romanes elsewhere also articulated a pan-psychist ontology of ‘the world as eject’ (Romanes 1895).

Both ethology and experimental animal psychology sought to break with Romanes-style anthropomorphism. After World War Two, Tinbergen famously formalised behavioural biology as a discipline concerned with four key questions: what are the physiological causes of the behavior? What is its survival value? How, historically, did it evolve? And, how does it develop during the life-time of the animal? (Tinbergen 1955). Tinbergen himself was wary of any attempts to answer what was (much later) termed the ‘fifth question’, namely that of animals’ subjective experience (Burghardt 1997). This question was picked up by cognitive ethology, a branch of the story I do not have space to follow up here (but see Candea Forthcoming).

The major shift in behavioural biology came in the 1970s with the increasing focus on evolutionary explanations of behavior (Tinbergen’s ‘survival value’ question, expanded to include the broader notion of ‘reproductive fitness’). For external observers, this shift was most famously associated with E. O. Wilson’s book *Sociobiology*. Contemporary behavioural ecology (Krebs and Davies 1997) is the heir of 1970s sociobiology and the shift in terminology, I was told by some practising behavioural ecologists, is partly due to the high-profile controversy over Wilson’s attempt to extend sociobiology to humans (Segerstråle 2000). But contemporary behavioural ecology also represents a turn back from some of the excessively ‘selectionist’ aspects of strict sociobiological analysis, towards a greater attention to the interplay of physiological causation (the main concern of classical ethology) and sociobiology’s near-exclusive concern with evolutionary function (Krebs and Davies 1997).

This shift speaks in complex ways to the problem of anthropomorphism. Early behavioural ecologists, although they were not concerned with what happens in animals’ minds, were nevertheless accused by critics (e.g. Kennedy 1992) of anthropomorphism for the over-use of metaphors such as ‘the selfish gene’ (Dawkins 1976). The worry there was not about misguided ‘mind-reading’ but about the potential confusion between a functional description, metaphorically cast as a purposive intention (here the function of maximising self-reproduction, metaphorically cast as ‘selfishness’) and the actual physiological mechanisms which in this view proximately *cause* the behaviour. The problem is not the metaphor per se, but rather the potential confusion of two of Tinbergen’s questions: that of function and causation (Krebs & Davies 1997: 11).

We can already see that this specific version of the problem of anthropomorphism no longer maps so neatly onto the contrast between shamanist (other as person) and objectivist (other as thing) epistemologies. Rather it points to the danger of taking a theoretical model (evolutionary function), for a description of the facts on the ground (physiological causation). This somewhat complex logic will become clearer through an example.

MOUSE-EYE VIEW

A friend of mine was mystified by the behaviour of the mice in her countryside cottage: she had repeatedly found that the little plastic trough containing pellets of poison (which in desperation at the proliferation of mice, she had finally laid down under the kitchen sink) had been filled with small bits of mortar and stone, evidently carried

from within the walls of the house. One morning, she even found small bits of stone laid all round the tall cardboard box containing the poison pellets, which she also kept in the same cabinet. She, and all the friends (outside my fieldwork) to whom I told the story, were thoroughly bemused by what seemed simultaneously an eerily intelligent and yet incomprehensible move: why were they doing it? What were they trying to achieve? Could it be a sign to other mice to keep away? Who knew mice were that clever!

When I recounted the story to Mike, a behavioural ecologist associated with the Kalahari Meerkat Project (cf. Note 1), he mused for a few seconds, fascinated, then suggested the following theory: perhaps the mice, who were adapted to living in tunnels and narrow enclosed spaces, had evolved a simple reaction to perceived hazard which consisted of blocking the tunnel. Even though, outside of a tunnel, the same behaviour pattern – putting stones in front of, on or around a perceived hazard – no longer served any function, the behaviour continued to be elicited by perceived risk.

I am in no position to evaluate the strength or weakness of this hypothesis (which Mike himself offered very tentatively), but am recounting the story here as a fairly typical instance of behavioural ecology-style reasoning about animal behaviour, and how it differs from that of other Euroamericans such as my other friends and I. Whereas our first attempt at explaining the mice's behaviour had sought subjective intentional motives behind their actions, Mike instantly bypassed that question and sought for a function which might have led to such behaviour being selected for.

This is not an isolated case, but an entrenched disciplinary orientation. Thus, Marian Dawkins opens her methodology manual *Observing Animal Behaviour* by enjoining the reader to imagine watching seagulls performing some unknown behaviour. She imagines the reader wondering:

“Why? What makes them do it? What do they get out of it? [...] Although you may not have realised it, the questions that arose as you watched the gulls were of several different types, each demanding a rather different sort of answer. The questions ‘why?’ and ‘What do they get out of it?’, for example, are asking about the function of the behaviour – that is, what evolutionary advantage the gulls gain [...] You can also ask ‘what makes gulls do it?’, ‘why do they start?’, or ‘what stimulates them?’ These are questions about the immediate *causation* of behaviour” (Dawkins 2007:1-4)

Utterly absent from Dawkins' scenario, however – as if it simply wouldn't arise – is the question: what did they think they were doing? Or what were they trying to do? Intentionality and perspective are bypassed, or rather redirected towards answers in terms of evolutionary function: the answer to ‘why’ is, by definition, ‘to gain evolutionary advantage’.

Thus when speaking amongst themselves, behavioural biologists and Kalahari Meerkat project volunteers were ever describing what dominant or subordinate meerkats ‘want’, what they are ‘trying to do’, explaining certain actions in terms of how these are evidently ‘in their interest’, and so forth. When pressed on this usage, however, fully-fledged researchers such as Mike would readily answer that this is a way of speaking, an ‘as if’: it doesn't imply that the animals consciously or intentionally want such things. They might be acting consciously, but in most cases, this intentional language is a shorthand for a far more abstract mode of explanation in which the process of selection itself provides an analogue for ‘purpose’, ‘intention’ or ‘telos’. A rough approximation of the logic might go something like this (for more nuanced accounts and debates over ‘function’ in evolutionary explanation, see Buller 1999): to explain a behaviour in terms of its function, is to show how it contributes to reproductive success (roughly speaking,

the ability of the organism to pass on its genes), since showing that it does so today suggests (barring ecological changes) that this advantage given to previous generations is what led to it being passed on to the present organism. A behaviour's function is thus in this logic, the evolutionary reason for its existence.

There has been intense discussion both within and without the discipline, over whether behavioural ecologists are beguiled by their own intentional language and forget it is a metaphor (Kennedy 1992; Crist 1999), and it is true that in my experience, more junior researchers such as the volunteers at the Kalahari Meerkat Project, who had an undergraduate training in biology, or even some PhD students, were often less clear-cut about where the 'way of speaking' ended and where began the quite literal sense in which meerkats consciously seek their own interest. But in a broader sense, this is beside the point, since ultimately, conscious direction of one's action, if and when it comes into the picture, would be chalked up as just another mechanism, one amongst the many ways in which organisms can maximise their fitness. The crucial distinction was not, in other words, between intention and function, but rather between function and causation.

One might say then, that in this view, the question of what the seagull or the mouse 'want' doesn't arise because it is, in the very broadest sense, neither difficult nor mysterious – like us, and like any organism, the mouse and the seagull 'want' to survive, reproduce, feed, etc. This is of course, a *theory* – the theory of evolution – but most practising behavioural ecologists take it to be fairly well grounded. This 'wanting' is a very general phenomenon, definitional of the living itself, and it is not located in the mind, but rather in the body. From a behavioural ecology perspective, whether or not a seagull, a mouse, a meerkat, or a human 'wants' such things consciously is an interesting and valid question, but one which can to all intents and purposes be delegated to cognitive scientists and/or philosophers.

Returning to the mouse example, bypassing intention only gets you from one puzzle to another: from a seemingly inscrutable intention, to a seemingly non-functional behaviour. But Mike's simultaneous, and equally instant move, was to contextualise the mouse's actions in terms of its typical environment. Could this behaviour, seemingly non-functional in this case, be functional in a different context, the context in which mice spent most of their time and to which they had adapted, namely narrow, enclosed spaces? These two conceptual moves (seeking for function rather than intention, locating oneself in the ecological context in which the organism evolved) are textbook principles of the evolutionary study of behaviour more generally.

BEHAVIOURAL ECOLOGY AS NATURALIST PERSPECTIVISM: ONE MAN'S MEAT IS ANOTHER MAN'S POISON

Crist is thus quite right in arguing that this approach structurally backgrounds the question of the animal's subjective perspective, rendering behaviour as the effect of the impersonal hand of selection, rather than mindful organisms (1999). But one might equally say that Mike was much more attentive than I or any of my non-scientist friends had been, to what one might call the 'mouse-eye-view' of the problem – albeit in a radically different sense. Whereas we were wondering about a perspective located in the mouse's mind (what was the mouse thinking?), Mike was asking about a perspective located in the mouse's body – a body whose home is in narrow, enclosed spaces which can be manipulated, opened and blocked off in a particular way, a body which only tentatively and short-sightedly ventures out into the open (see also Despret 2009).

The contrast between naturalism and perspectivism is not far off. In Viveiros de Castro's elegant summation, whereas for Euroamerican naturalists, people see in

different ways the same things because of differences located in their mind (cultures, representations, etc.), for Amerindian perspectivists, “animals see in the *same* way as we do *different* things because their bodies are different from ours.” (Viveiros de Castro 1998:478). While my non-behavioural-ecologist friends and I were asking how the mouse’s mind made it see differently the same objects as us (the poison trough, the stones), Mike was asking how the mouse’s body located its ‘home’ and its ‘danger’ in different objects (tunnels, poison).

The analogy between perspectivism and behavioural ecology sounds rather strained until one focuses on two crucial points of Viveiros de Castro’s exposition. Firstly, as noted above, a perspective is not a representation – ‘perspective’ is embodied rather than located in the mind (1998:478). But wait – am I not confusing a radically materialist Western ontology with its very opposite: one inhabited by multiple ‘souls’? Even though perspective is indeed embodied, the ability to adopt a point of view for Viveiros de Castro is “a power of the soul and non-humans are subjects insofar as they have (or are) spirit” (ibid.), whereas it is a common assumption that western scientists have long ago done away with human, let alone animal souls. But look again at how little is actually entailed by the notion of a ‘soul’, which is “formally identical in all species” (ibid.), and which by itself tells you nothing about their specific perspective. Now compare this ‘soul’ with that mysterious yet commonplace thing called ‘life’, which lies at the heart of evolutionary biology, that universal motivator of organisms, which drives us all, irrespective of our ‘minds’, to “maximise our reproductive fitness” in a formally identical way, but in a myriad different manners through our different bodies.

I should highlight that there have been other theorisations of the soul in Amerindian (Vilaca 2005; Fausto 2007) and inner Asian (Pedersen and Willerslev 2012) perspectivism, as well as challenges to Viveiros de Castro’s model from other ethnographers of Amazonia (Turner 2009). My comparison – lest there be any confusion – is not between Amerindian ethnographic reality (in which I claim no expertise) and behavioural ecology, but rather between the latter and the model of perspectivism outlined by Viveiros de Castro in the works cited here.

Secondly, the word ‘human’ in Viveiros de Castro’s account, is a deictic rather than a description of a natural kind: ‘humans’ means ‘we’ (476). The same is true of ‘peccary’, ‘village’, ‘beer’, etc. We are thus inching closer and closer to the world of behavioural ecology, in which a set of ‘organisms’ each have their ‘environment’, their ‘mates’, their ‘prey’, their ‘predators’ – all terms which apply to different realities depending on participants’ bodies, in the way human, village, peccary, beer, etc. apply in Amerindian perspectivism (cf. Turner 2009). Indeed the terminology used in sociobiology is far more precise than general talk of predator and prey: researchers at the Kalahari Meerkat Project speaks not just of (meerkat) society or of (meerkat) dominance, but of (meerkat) babysitters, of (meerkat) evictions, of (meerkat) begging, etc.

Undergraduate students upon first encounter with Viveiros de Castro’s article often read him to be saying that Amerindians are simply and unduly projecting onto the animal world a narrow model of human village life. Similarly, sociobiologists have sometimes been accused (particularly perhaps by social scientists) of unduly projecting onto the animal world an impoverished version of the rational economic actor. On the above reading, however, such accusations are far from the mark in both cases, precisely because they assume a stable vision of what is real (‘meerkats don’t *really* have babysitters, any more than jaguars *really* drink beer’). The point however is that in perspectivism, as I understand it, the claim is not that Jaguars drink (human) beer, but that ‘beer’ is that thing, different in each case, which ‘persons’ (both human and Jaguar ones) drink.

Similarly, the point of behavioural ecologists' usage is not that meerkats live in (human) societies, or use (human) babysitters, but rather that 'society' is that kind of living together, different in each case, which organisms (both human and non-human ones) do, and 'babysitting' is that kind of looking after offspring which organisms do – even though this same word points to completely different realities when these organisms are respectively meerkats or humans. Eileen Crist is thus right in noting that sociobiologists' uses of what she calls 'social-category terms' for non-humans are not straightforwardly cases of anthropomorphism, but precisely the opposite: they 'allow a view into animal society such that human affairs reflect it' (Crist 1999:162). However, one does not necessarily have to conclude that these concepts are therefore made into 'natural kinds' (ibid.). One could just as well say they become 'deictics': single terms which contextually point to different realities.

Of course, behavioural ecologists I have met are very much 'mononaturalist' – they would balk at the suggestion of multiple Natures, just as much as they would balk at the thought that all animals share the same culture. But just as the single culture, in Viveiros de Castro's perspectivism, equates to a standardised schematic set of deictic terms (predator, prey, beer, village, etc.) which in practice index different realities, the multiple 'natures' – to the best of my understanding – are precisely not multiple Natures, as in multiple worlds each of which is simultaneously – by impossibility – the only world (cf. Turner 2009). This seems to emerge from Viveiros de Castro's account of multinaturalism by analogy to kinship:

if saying that crickets are the fish of the dead or that mud is the hammock of tapirs is like saying that my sister Isabel's son, Miguel, is my nephew, then there is no relativism involved. Isabel is not a mother "for" Miguel, from Miguel's "point of view" in the usual, relativist-subjectivist sense of the expression. Isabel is the mother of Miguel, she is really and objectively Miguel's mother, just as I am really Miguel's uncle. This is a genitive, internal relation (my sister is the mother of someone, our cricket the fish of someone) and not a representational, external connection of the type "X is fish for someone," which implies that X is "represented" as fish, whatever X is "in itself." It would be absurd to say that, since Miguel is the son of Isabel but not mine, then Miguel is not a son "for me"—for indeed he is. He is my sister's son, precisely. Now imagine that all Amerindian substances were of this sort. (Eduardo Viveiros de Castro 2000:473)

If the analogy is to be taken literally (which it may not), it would follow that while my blood is the jaguar's beer, these two things are nevertheless spatially coextensive, one entity (just as Miguel is) –much in the same way, say, that the meerkat's mother is, really and objectively, the scorpion's predator. If this interpretation of Viveiros de Castro's perspectivism is correct, then, its multiple 'natures' are not far removed from what behavioural ecologists and others call ecologies – and what once upon a time Von Uexkull termed 'Umwelten' (2010; Descola draws the same connection in 2007:240). Suddenly, the echoes suggested by anthropologists such as Eduardo Kohn, between Amerindian perspectivism and the biosemiotic turn in western biology (Kohn 2007; and this issue) become less surprising. Certainly on this account, it would seem easier to translate the concerns of behavioural ecology – up to a point – into a perspectivist idiom, than those of standard culturally relativist anthropology.

THE YUKAGHIRS' PROBLEM

Reading perspectivism back into behavioural ecology in this way has some interesting effects. Firstly, it recasts the profound antinomy between sociobiology and contemporary social anthropology as something which might itself be ethnographically interesting. Could the very features which make evolutionary explanations of behaviour so often seem unpalatable to social anthropologists (Segestråle 2000) –the focus on bodies rather than minds as the locus of significant differences, or the rolling out of a standardised set of social-category terms not just across cultures but indeed across species– be precisely the sorts of things which we have been striving to take seriously in other contexts?

Secondly, it provides a new conceptual handle on the way in which behavioural ecologists can combine a profound, careful and knowledgeable engagement in the worlds of the animals they study, with what might seem to be a strange detachment from the usual questions of mind, sentiment or perspective which matter so much to other Euroamericans, a dynamic I have sought to explore ethnographically elsewhere (see Candea 2010 and Forthcoming). Reading behavioural ecology as a kind of perspectivism might help unsettle some of the assumptions inherent in the alternative proposed in the introduction by Crist (and indeed Viveiros de Castro) between subjective engagement and objective distance.

In practice, volunteers at the Kalahari Meerkat Project also face concerns with anthropomorphism in the more usual sense of projection and subjectivity. Particularly in relation to discussions of anthropomorphism, volunteers frequently spoke of themselves as being 'able to see like a scientist', or to 'be' a scientist, but also, at other times or simultaneously, to 'be' personal, emotional etc. (for a fuller ethnographic account, see Candea forthcoming). All of this is straightforwardly 'perspectivalist' (Strathern 2011), rather than 'perspectivist' – different points of view are taken on the same reality.

But the preceding account complicates this picture by highlighting that 'seeing like a scientist' in behavioural ecology also itself involves a type of perspectivism: learning to see animals worlds in terms of a single evolutionary teleology – one theoretical perspective – distributed across different organisms-in-environments. For practising behavioural ecologists, then the problem of anthropomorphism is more complex than it might first seem. It is not merely a case of resisting 'projection', but rather of distinguishing false 'projection' from correct theoretical perspective-taking.

Thus what the volunteers felt distinguished them from their friends back home or other people who engaged with meerkats primarily in an anthropomorphic way (such as viewers of the show *Meerkat Manor*, which was also filmed at the research site – cf. Candea 2010), was an ability to see through some of the enticing but deceptive ways in which meerkats mirror humans: their cute ears, posture and look, for instance. These similarities also make it easy to overlook the ways in which they are different, and researchers at the meerkat project delighted in pointing these out to naive outsiders: meerkats cursorily abandon their young, eat their own vomit and frequently mark their territory by rubbing their anus on stones, trees, each other or the observer's shoes. Meerkats, they point out, are not very much like us!

But then again, for the researchers, meerkats are also like humans in literal ways: they eat, they fight, they live together in groups, they get pregnant, they even have babysitters, members get evicted from the group... The crucial skill lies in distinguishing at what point along the line real identities, meaningful connections, turn into useful analogies or deceptive metaphors.

At this point, let me invoke a second analogy of my own. Rane Willerslev's account of Yukhagir hunters (Willerslev 2004; Willerslev 2007a) explicitly draws on, yet modifies aspects of the perspectivist model proposed by Viveiros de Castro. Willerslev argues that

for Yukhagir hunters as for Amerindian perspectivists, personhood is not limited to humans. A good hunter must learn in various ways to embody the perspective of their prey, to assume the animal's point of view. However, the hunter must nevertheless remain aware of the very real differences between human hunters and non-human preys – since in the end the animal must be killed and consumed. Of course Willerslev is writing of 'double perspectives' in a perspectivist, rather than perspectivalist sense (cf. Pedersen 2012:92-94). But the problems encountered by Yukhagir hunters and behavioural ecologists are analogous nonetheless. For Willerslev, the hunting practices he describes evidence a particular positioning within an ontologically unstable landscape:

"what defines power in the Yukhagir world, where all beings continually mirror and echo one another and where the various boundaries between self and other are permeable and easily crossed, is the ability *not* to confuse analogy with identity. To exercise power is to steer a difficult course between transcending difference and maintaining identity, to see the world from the perspectives of various others, human as well as nonhuman, yet avoid total participation and confusion." (Willerslev 2007a:190)

Similarly, it truly matters to behavioural ecologists and to scientists more generally, that not every connection is a good connection, and that metaphor must be distinguished from functional analogy or physiological similarity, phylogenetic relationship from convergent evolution, correlation from causation, and so forth. In sum, the Yukhagir's problem – how not to confuse analogy with identity in a world in which all beings constantly mirror and echo each other – is also the behavioural ecologists' problem. Animism is thus not "*the* mode of being that puts us into contact with the world and yet separates us from it." (Willerslev 2007a:190 my emphasis) – it is one such mode. Field behavioural ecology is another.

This came through most powerfully in a conversation with a senior behavioural ecologist. The researcher was lamenting the way in which some colleagues use terms denoting exchange and agreement to refer to non-human animals. In his view animals don't make agreements, and yet such authors have "used [this language] so much they've got to believe in it.". Just as I was concluding that this was a global attack on anthropomorphic language, the researcher concluded forcefully:

You do something that's in your own interests, and you may calculate how what you do is going to affect someone else and take that into account. So animals I think manipulate each other, they coerce each other, they assist each other, but they don't make agreements to assist.

This brief snippet condenses the various points I have been making so far. Without them, it might seem confusing: why the stringent exclusion of certain anthropomorphic terminology, side by side with the easy usage of other terms which sound equally intentional or human-like (manipulate, coerce...)? Why the unproblematic taking of perspective (where 'you' is the animal), just as the speaker is making a point about the *difference* between humans and non-humans? One crucial distinction here is between evolutionary perspective-taking (putting oneself in the animal's position in order to explain how they may operate), and 'mentalist' implications of conscious calculation. Another is between settled ontological schemes and empirical enquiries into sameness and difference.

In sum, to understand the way in which concerns about anthropomorphism operate in behavioural ecology, it is insufficient to map a stable naturalist ontology in which non-

humans are by definition devoid of interiority, and therefore uses of human-derived terms is by definition incorrect. Arguing that scientists flip between two ontological modes, one naturalist, one animist, of encountering the same reality (cf. Descola 2007:239), is perhaps closer to the truth, and as I will point out below, it reflects what some scientists at least might describe themselves as doing. But only up to a point. For the image of two settled ontological alternatives, two kinds of certainty, two mutually opposed ways of knowing, misses the central operator which motivates the shift between these various ways of speaking and thinking: a concern with what is or is not the case. Some applications of human terminology to (some) non-human animals is to the best of our knowledge accurate, and other such usage is not. In some respects 'you' can stand for the animal, and in some respects you cannot. While in some cases researchers may think they have a pretty good idea, ultimately, deciding which is which is a matter for empirical investigation (see for instance Mitchell 2005:114), not ontological fiat. That is, 'quintessentially' speaking, the behavioural ecologists' solution to their own version of what I have called the Yukaghirs' problem.

OUR PROBLEM

Where does this leave anthropology? Is there any sense in which the Yukagir's problem (how not to confuse analogy with identity) is also our problem? Willerslev himself has made this argument in relation to the controlled immersion that is ethnography (Willerslev 2007b), but I would like to round up this discussion by considering this final analogy in relation to theory, and particularly in relation to the pervasive use of binary contrasts in recent anthropological work on ontological alterity.

Viveiros de Castro, for instance, notes:

In Amerindian cosmology, the real world of the different species depends on their points of view since the 'world in general' consists of the different species themselves; [...]: there are no points of view onto things — it is things and beings which are points of view (as Deleuze would say, 1988: 203). The question for Indians, therefore, is not one of knowing "how monkeys see the world" (Cheney and Seyfarth 1990), but what world is expressed through monkeys, of what world they *are* the point of view. I believe this is a lesson our own anthropology can learn from. (Viveiros de Castro 2004b:11)

In asking that question, Cheney and Seyfarth are concerned with animal cognition. But much of the western science of animal behaviour is not. If we take, instead, behavioural ecologists as our reference point for Western science, then this particular gap between 'us' and 'them' appears less radical, although a number of gaps between 'us' and 'us' concomitantly widen. But then again this was already evident in the quote: Cheney and Seyfarth and Deleuze are, in some respects, both 'us' and yet the latter it seems sounds much more like 'them'.

Our analogue to the Yukagir's problem of dangerous shifting and mirroring, in other words, is perhaps to be found in the persistent echoes between the contrasts anthropologists draw externally (between 'us' and 'them') and those which are drawn internally (within the resulting 'us'). Debates over anthropomorphism in animal behaviour are a case in point. On the one hand contemporary scientists are the unknowing heirs of Tylorean anthropological views when they claim that to explain an animal's behaviour simply by pointing to a purported aim or purpose is "effectively a throw-back to primitive animism" (Kennedy 1992:9), or that "[t]he study of animal cognition will only proceed effectively once it rids itself of *pre-scientific* notions like

This is a pre-print of Candea M. 2012. Different Species, One Theory: Reflections on Anthropomorphism and Anthropological Comparison. *Cambridge Anthropology* 30: 118-135.

anthropomorphism.” (Wynne 2005:134; emphasis added). On the other hand, contemporary anthropologists who, reclaiming animism from Tylor (e.g. Bird-David 1999), map it as an equally valid ontology, the inverse of naturalist objectivism, echo inversions from *within*: Romanes’ theory of the ‘eject’ for instance, or, Crist’s account of classic naturalists’ ‘immersive’ or ‘personal’ objectivity².

Some of these echoes are coincidental, others are the mark of actual theoretical connections. Thus Romanes’ philosophy of ‘the world as eject’ is genetically related to the other post-Darwinian philosophies (from Tarde to Bergson to Deleuze), precisely the kind of internal alternatives to the Kantian tradition, and which have in turn provided inspiration to anthropologists seeking new ways of articulating *external* alternatives to this canon.

The result is that clear-cut contrasts between us and them are constantly undermined by echoes and mirrors, copies and transformations. Tensions between objectivist and shamanist epistemologies echo in the history of western science and philosophy; articulations of radical opposites to ‘our’ naturalism’ can be used to pick out some characteristics of our own knowledge practices, Darwin sounds like a shaman and Amazonians like behavioural ecologists... Here too, as in the Yukaghir world, the various boundaries between self and other become permeable and, it seems, easily crossed. How to deal with these echoes and mirrorings is, I would argue, contrastive anthropologists’ version of the Yukaghir’s problem, just as concerns about anthropomorphism are behavioural biologists’ version of it.

Behavioural ecologists worry about taking their theoretical account of evolutionary function for an account of the physiological mechanisms which, to them, proximally cause behaviour. Our worry is also located in the space between theory and ethnography, between the language of analysis and the object of analysis (for this contrast, see Strathern 2011). Does Deleuze sound like ‘them’, or do ‘they’, rendered in our terms, end up sounding like Deleuze? Or are they and Deleuze substantively saying the same thing? The answer to these questions matters if our aim is to take ‘them’ (rather than Deleuze) seriously (Heywood 2012; Laidlaw 2012). Note that the question applies equally whether the them/us contrast is geographically located (where ‘they’ are Amerindians, say, and ‘we’ are Euroamericans), or not (where ‘they’ are behavioural ecologists, say, and ‘we’ are anthropologists). ‘They’ is the name for the ethnographic outside which is supposed to disturb ‘our’ existing theoretical commitments.

One solution to the above problem of anthropological mirroring would be, effectively, to return to the universal. Descola, for instance, notes that the four ontological modes he describes (totemism, naturalism, animism, analogism) are potentially present in all of us (2007: 239) – an us which here stretches to humanity as a whole. While one mode always dominates and acts as a sort of ‘filter [...] through which we perceive reality’ (240, MC trans.), the same person can deploy different modes, consciously or unconsciously: even someone who like himself “has been brought up in a naturalist world”, Descola notes, sometimes behaves like an animist, such as when he talks to his cat. In this view, if there are echoes between distinctions internal to ‘the west’, and distinctions drawn between ‘the west’ and elsewhere, this is simply because the same thing is true in both places: the contrast between animism and naturalism (and totemism, and analogism) is in effect itself a cognitive universal which emerges to different degrees in different places (Descola 2005:145-162). Thus, one might claim that Deleuze, Darwin and the behavioural ecologists are in point of fact tapping in different ways into the same ‘animist’ ontological mode, while also drawing on the naturalist mode in other respects.

This is a pre-print of Candea M. 2012. Different Species, One Theory: Reflections on Anthropomorphism and Anthropological Comparison. *Cambridge Anthropology* 30: 118-135.

But as various authors have pointed out, this type of solution, seems to reinstate precisely the kind of naturalist status quo which it purported to put in question in the first place (Latour 2009; see also Yates-Doerr and Mol, this volume, Bertoni, this volume). What Viveiros de Castro's notion of 'multi-naturalism' seeks to challenge is the whole paraphernalia of a single world and multiple worldviews, a single reality and multiple 'filters'. This path suggests a more radical solution to the problem of mirroring. Thus, Viveiros de Castro notes that anthropologists are ever accusing each other of seeing in the 'Other' merely a mirror of the self – the discipline is mired in epistemological angst. 'It is high time' he argues, 'to put epistemological questions to rest' (2004: 484, 483 n36). Taking others seriously requires precisely an exit from epistemology, representationalism, and the propositional. Anthropology should proceed through 'controlled equivocations', in which the stake is not accurate translation of their terms into ours, not 'truth' or 'correctness', but rather a kind of disjunctive and infinite synthesis (2004b). Anthropology's task, in this view is "not to *explicate the worlds of others* but rather to *multiply our world*" (Viveiros de Castro 2011; see also Walford, this volume; Latour 2009).

Not all arguments which invoke ontological multiplicity call for a radical exit from epistemology in anthropology's own practice (see for instance Pedersen 2011, Holbraad 2011). But those who do will find that epistemological questions are not so easily laid to rest. For such a move is in turn amenable to the same rejoinder: critiques of epistemology and representation, associated to calls to move from description to performative effect, are themselves a staple of the western philosophical anti-canon, evident for instance in the work of thinkers such as, once again, Deleuze (Laidlaw 2012; Heywood 2012)³, but also Isabelle Stengers or Bruno Latour. The problem with non-representationalism as an attempt to challenge 'our' reality, is that it itself is relatively familiar: some of 'us' (and here I mean anthropologists, as much as Westerners) have been non-representationalist for a long time. An external contrast seems to echo an internal one, once again.

This rejoins the point elegantly made by Marilyn Strathern about "the regular realization that the difference between what one might ascribe to Melanesian and to Euroamerican viewpoints is already the viewpoint of Euroamerican discourse, [...] a realization to be encountered at any order of analysis." (Strathern 2011:90). I don't think however, that this realisation warrants a complete retreat into epistemology (Hastrup 2004:460)⁴, or, what in the end is not so different, an exit from epistemology altogether.

On the contrary, the realisation that every us/them contrast is, in the end, *our* us/them contrast can be a very productive engine of anthropological enquiry – although it is of course far from the only such engine. This repeated sense of failure could prompt an ever-renewed attempt to square up to alterity. In every attempt at translation, anthropologists would open up new 'controlled equivocations', driven by the care to avoid 'silencing the Other by presuming a univocity – the essential similarity – between what the Other and we are saying' (Viveiros de Castro 2004: 10). 'Endo-anthropology', pursuing the same project within 'our own' spaces, would be here to remind us that 'we' here includes not just Kant or Descartes, as it were, but also Deleuze, not just Cheney & Seyfarth, but also the behavioural ecologists.

None of this eliminates the difference between perspectivism and naturalism, or between us and them. It simply raises a further question, the next step of a recursive, contrastive, empirical anthropology: what are the differences between Indians and Deleuze, or between Indians and behavioural ecologists (once we have identified that the latter are not quite the same as Cheney & Seyfarth), or indeed between behavioural ecologists and Deleuze?

But it is hard to see how we could keep asking such questions, and hold on to the commitment to avoid univocality, without at least a little bit of epistemological angst, not to mention a smidgen of good old-fashioned naturalist inquisitiveness about what is, or is not, the case.

NOTES

Acknowledgements: My first thanks go to volunteers and researchers associated with the Kalahari Meerkat Project, and behavioural ecologists and evolutionary students of behaviour elsewhere, who have generously allowed me to glimpse inside their practical and conceptual worlds. The paper's arguments have benefitted immensely from close reading, invaluable advice and bracing critique by Lys Alcaya-Stevens, Paolo Heywood, James Laidlaw, Nick Long, Morten Pedersen, Marilyn Strathern and Tom Yarrow. Any remaining errors and infelicities are my own.

¹ My ethnographic insights into the world of behavioural ecology comes from multi-sited fieldwork over the past three years, including time spent at a research site in South Africa, the Kalahari Meerkat Project, at conferences, and interviews with researchers associated with the project in the UK. I have written some more ethnographic accounts based on these experiences elsewhere (Candea 2010, Forthcoming), but in an experiment with 'tactical quintessentialism', this paper will be articulating a more broad-brush account drawn from these various experiences and from the writings of behavioural ecologists themselves and those historians and sociologists of behavioural biology. Thus I take it as understood that the present schematic account of behavioural ecology necessarily glosses over crucial differences amongst individuals, methods, and levels of training – much like quintessentialist accounts of 'Amerindian perspectivism' or 'naturalism' do.

² Although see Pedersen and Willerslev (2012) for a refreshingly new way of articulating the relationship between Tylor and recent versions of ontological perspectivism.

³ Thus Laidlaw notes in a review of Pedersen (2011) that according to some proponents of ontological multiplicity, it seems like

the theoretical challenge for anthropology is to develop new concepts to enable us to understand these alternative 'natural' realities: new notions of truth, cause, relation, etc. Luckily, by an amazing historical coincidence, many of the necessary conceptual resources were prefabricated for us by Gilles Deleuze. (2012:np)

⁴ "To get it right we have to shift our attention from the collapsed relationship between knowledge and evidence to the processes by which we know, that is how we make connections in a fragmented world, and how these are imbued with particular styles of reasoning."

BIBLIOGRAPHY

- Bird-David, N. (1999). "'Animism' Revisited [and Comments and Reply]" *Current Anthropology* **40**: 567-591.
- Burghardt, G. M. (1997). Amending Tinbergen: a Fifth Aim for Ethology. *Anthropomorphism, Anecdotes and Animals*. R. W. Mitchell, N. S. Thompson and H. Lyn Miles. Albany, State University of New York Press: 254-276.
- Burkhardt, R. W. (2005). *Patterns of behavior*. Chicago, University of Chicago Press.
- Candea, M. (2010). "I fell in love with Carlos the Meerkat." *American Ethnologist* **37**(2): 241-258.
- Candea, M. (2011). "Endo/Exo." *Common Knowledge* **17**(1): 146-150.
- Candea, M. (Forthcoming). "Suspending Belief." *American Anthropologist*.
- Cheney, D. L. and R. M. Seyfarth (1990). *How monkeys see the world*. Chicago, University of Chicago Press.
- Crist, E. (1999). *Images of animals*. Philadelphia, Temple University Press.
- Darwin, C. (1874). *The descent of man, and selection in relation to sex*. New York, A. L. Burt.
- Dawkins, M. S. (2007). *Observing animal Behaviour*. Oxford ; New York, Oxford University Press.
- Dawkins, R. 1976. *The selfish gene*. Oxford: Oxford University Press.
- Descola, P. (2005). *Par delà nature et culture*. Paris, Gallimard.
- Descola, P. (2007). "À propos de Par-delà nature et culture." *Tracés*. **12**: 231-252.
- Despret, V. (2009). *Penser comme un rat*. Versailles, Éditions Quae.
- De Waal, F. B. M. 1999. Anthropomorphism and anthropodenial. *Philosophical Topics* **27**:255-280.
- Fausto, C. (2007). "Feasting on People." *Current Anthropology* **48**(4): 497-530.
- Griffin, D. R. (1984). *Animal thinking*. Cambridge, Mass, Harvard University Press.
- Hastrup, K. (2004). "Getting it right." *Anthropological Theory* **4**(4): 455-472.
- Heywood, P. (2012). "Anthropology and What There Is" *Cambridge Anthropology* **30**(1): 143-151.
- Jones, S. (2010). Panda cub mulls substitute parents playing dress-up. *The Guardian*.
- Kennedy, J. S. (1992). *The new anthropomorphism*. Cambridge: Cambridge University Press.
- Kohn, E. (2007). "How Dogs dream." *American Ethnologist* **34** (1): 3-24.
- Krebs, J. R. and N. B. Davies (1997). *Behavioural ecology*. Cambridge, Mass, Blackwell Science.
- Laidlaw, J. (2012). "Ontologically Challenged." *Anthropology of This Century* 2012.
- Latour, B. (2009). "Perspectivism: 'Type' or 'bomb'?" *Anthropology Today* **25** (2): 1-2.
- Martin, P. R. and P. P. G. Bateson (2007). *Measuring behaviour*. Cambridge ; New York, Cambridge University Press.
- Mitchell, S. D. (2005). Anthropomorphism and cross-species modelling. *Thinking with animals*. L. Daston and G. Mitman. New York, Columbia University Press.
- Nadasdy, P. (2007). "The gift in the animal" *American Ethnologist* **34**(1): 25-43.

This is a pre-print of Candea M. 2012. Different Species, One Theory: Reflections on Anthropomorphism and Anthropological Comparison. *Cambridge Anthropology* 30: 118-135.

- Pedersen, M. A. (2011). *Not quite shamans*. Ithaca, Cornell University Press.
- Pedersen, M. A. and R. Willerslev (2012). "The soul of the soul is the body" *Common Knowledge* 18(3): 464-486.
- Rees, A. (2007). "Reflections on the Field" *Social Studies of Science* 37(6): 881.
- Romanes, G. J. (1883). *Animal intelligence*. New York, D. Appleton and Company.
- Romanes, G. J. (1895). *Mind and motion and monism*. New York and London, Longmans, Green, and co.
- Segerstråle, U. C. O. (2000). *Defenders of the Truth*. Oxford ; New York, Oxford University Press.
- Smuts, B. (2001). Encounters with animal minds. *Between ourselves*. E. Thompson. Thorverton, UK ; Charlottesville, VA, Imprint Academic: 293-309.
- Strathern, M. (2011). "Binary License." *Common Knowledge* 17 (1): 87-103.
- Thompson, N. S. (1994). "The many perils of ejective anthropomorphism." *Behavior and Philosophy* 22(2): 59-70.
- Tinbergen, N. (1955). *The study of instinct*. Oxford, Clarendon.
- Turner, T. (2009). "The Crisis of Late Structuralism. Perspectivism and Animism." *Tipiti* 7(1): 3-40.
- Tylor, E. B. (1874). *Primitive culture*. New York, H. Holt and Company.
- Vilaca, A. (2005). "Chronically unstable bodies." *Journal of the Royal Anthropological Institute* 11(3): 445-464.
- Viveiros de Castro, E. (1998). "Cosmological Deixis and Amerindian Perspectivism." *Journal of the Royal Anthropological Institute* 4(3): 469-488.
- Viveiros de Castro, E. (2004a). "Exchanging Perspectives" *Common Knowledge* 10(3): 463-484.
- Viveiros de Castro, E. (2004b). "Perspectival anthropology and the method of controlled equivocation." *Tipiti* 2(1): 3-22.
- Viveiros de Castro, E. (2011). "Zeno and the Art of Anthropology." *Common Knowledge* 17 (1): 128-145.
- Von Üexkull, J. 2010. *Milieu animal et milieu humain*. Paris: Bibliothèque Rivages.
- Willerslev, R. (2004). "Not animal, Not not-animal" *The Journal of the Royal Anthropological Institute* 10 (3): 629-652.
- Willerslev, R. (2007a). *Soul hunters*. Berkeley, University of California Press.
- Willerslev, R. (2007b). "To have the world at a distance". *Skilled visions*. C. Grasseni. New York, Berghahn Books: 23-46.