

‘What’s love got to do with It’ (1): How trans-species learning through emotional engagement can benefit wildlife recovery (2)

**Professor Steve Garlick MCom, PhD Dr Rosemary Austen BSc, MBBS, PhD  
Possumwood Wildlife Inc [www.possumwood.com.au](http://www.possumwood.com.au)**

## **1. Introduction: What is trans-species learning?**

Wildlife recovery from physical injury or emotional separation and distress may require many months of care. During this time the emotional and behavioural state of the animal will change. Being perceptive to these changes and adjusting the care regime on the basis of this will enhance the success of the recovery process.

In earlier work on post-traumatic stress disorder (PTSD) in kangaroos we argued that engaging with the emotional side of wildlife can tell us much about what is needed in the care situation (Garlick and Austen 2014b) to enable recovery beyond the provision of medication, veterinary surgery and pathology analysis.

Spending relational time amongst wild animals can reveal a new source of knowledge that takes us beyond the usual human ‘knowing about’ chauvinistic pedagogy common to many wildlife ‘sciences’, such as ecology and conservation, that objectify the animal (Garlick and Austen 2012a, 2012b, 2014a, 2014b and Garlick 2014).

Human exceptionalism and its inherent rationalism have ensured that wildlife knowledge systems have been epistemologically ignored in animal science. By not considering the knowledge that wildlife acquire from their kin and their environment science demonstrates an arrogance and epistemicide (Santos 2007). The result has been a divide between animal well-being and the ‘science’ that certain animal disciplines bring (Visvanathan 1997, 2002, 2009).

Wildlife rehabilitators need access to these previously unseen and unheard wildlife knowledge systems through trans-species learning so they can be more effective in their recovery work. We don’t yet know enough about the wildlife recovery process. Humans have an incomplete and erroneous knowing with regard to nature and its inhabitants. We argue that trans-species learning may be a lacuna or missing piece in this acquisition of knowledge by humans. This paper seeks to initially explore this.

For us, trans-species learning brings together the fields of: (a) trans-species psychology (Bradshaw), ie the cognitive, and emotional lives of animals; and (b) relational learning (Bingham and Sidorkin 2004). ie where a ‘being-for’ association is generated in the co-creation of knowledge (Bauman 1995). ‘Being- for’ in a trans-species learning sense for wildlife recovery connotes all of these characteristics. It is a reciprocity of understanding (Bauman 1995), in this case between the human and non-human animal in the care situation (Nodding 1989).

In this paper we unpack the suite of characteristics that are embraced by trans-species learning. We examine this in the wildlife recovery process of particular animals at our wildlife recovery centre where every year we help hundreds of sick and injured wild animals recover. In this work we focus in

particular on kangaroos who as a species exhibit overt emotion (Garlick 2014, Garlick and Austen 2012a, 2012b, 2014a, 2014b), have a gentle and affectionate nature and have demonstrated they can share learning through 'being-for' relationships (Garlick 2014 and Garlick and Austen 2014a, 2014b). It's our belief that wildlife carers, with an understanding and practice in these methods, can achieve better outcomes in tackling difficult cases of wildlife recovery.

- (1) Tina Turner. (1984). 'What's love got to do with it'. Private Dancer, Capitol Records.
- (2) Not yet refereed

## **2. A 'Being-for' ethic of care**

Neoliberal relations favour fragmentary, momentary and episodic encounters characterised by 'values' of competition, efficiency and individualism. These are the same superficial connections that humans, in general, have with animals. Action-oriented narratives of animals in the wild on film and television, or in 'wildlife parks' or 'nature reserves', are the closest most humans are prepared to be to an animal world. Other episodic connections with animals (and wildlife in particular), such as hunting, so-called 'culling', and factory/intensive farming are more sinister and involve cruelty. Institutions, companies and individuals that approach wildlife with the objective of making money view it as a 'resource', a 'pest', or 'entertainment'. Such people are unable to have a transformational experience with an animal, or unlock the secrets of the wildlife knowledge system.

Bauman's (1995) classification of forms of togetherness provides a useful tool for getting to the heart of what engaging with wildlife should be like if it is to stimulate learning in humans. Bauman describes 'being-aside' and 'being-with' as fragmented and episodic encounters characterised by a lack of consequence. In a 'being-aside' modality the participants exist only in the form of a co-presence with others. Participants move from a 'being-aside' to a 'being-with' modality where there is a mutual dependency – but only in so far as it relates to the specifics that the topic at hand requires (Bauman 1995: 50).

Derrida seeks much more in consciousness from an animal encounter than an episodic or non-consequential contact. Using Bauman's (1995) ideal 'forms of togetherness' the most complete form of togetherness with an 'other' is 'being-for'.

'Being-for is a leap from isolation to unity; yet not towards a fusion, that mystics' dream of shedding the burden of identity, but to an alloy whose precious qualities depend fully on the preservation of its ingredients' alterity and identity. Being-for is entered for the sake of safeguarding and defending the uniqueness of the Other; and that guardianship by the self as its task and responsibility makes the self truly unique, in the sense of being irreplaceable; no matter how numerous the defenders of the Other's unique otherness may be, the self is not absolved of responsibility. Bearing such a task without relief is what makes a unique self out of a cipher. Being-for is the act of transcendence of being-with.' (Bauman 1995: 51).

### 3. The emotional lives of wildlife

A new way of knowing about wildlife rehabilitation is proposed that seeks to learn directly from wildlife via their emotional states in a 'being-for' (Bauman 1995), relational (Derrida 2008, Sharpe 2005), ethic of care (Nodding 1989, Plumwood 1993, Kheel (2008) approach. Based on this epistemology we incorporate recent research on affective neuroscience in mammals (Panksepp 1998, 2004 and Franks 2010) into our own work in rehabilitating large numbers of seriously injured kangaroos to enable their recovery prior to their release/ return back to the wild (Garlick and Austen 2010). Advances in neuroscience in mammals and other species (Cambridge Declaration on Consciousness 2012) suggest that cognitive justice (Visvanathan 1997, 2002, 2009) ought to not only be a humanistic concept but should embrace the knowledge systems of other cognitive species.

As a form of new human learning, the knowledge held by wild animals has the potential to bring wildlife rehabilitation and caring to a new level of understanding.

Panksepp has identified two key emotional brain circuits in mammals. The first is 'seeking/ expecting', where the animal has an aspiration to engage with the wider world (2004:17). We note this in animals in our care that are making positive progress in their recovery. Reinforcing this behavioural trend aids the recovery process. The second key emotional brain circuit in mammals is 'fear/ escape'. We note this emotional behaviour in animals in our care that are not as yet showing positive signs of recovery. More engaged work is needed with these animals.

Panksepp has identified at least five other basic emotional states common to mammalian social affect, viz: anger, sexuality, nurturance, distress and joy. We have added a sixth state that we have called 'recreation' (Garlick 2014 and Garlick and Austen 2014a). Panksepp suggests that these emotions are important in influencing physical and mental conditions in humans such as pain, depression and other psychiatric disorders. We have found there are similar effects for wildlife in their recovery from illness and injury (Panksepp 2004: 27-29).

Table 1 below shows these neural emotion states (Column 1) and their outward behavioural manifestation as they relate to the kangaroo (Column 2). These outward indicators have come from close observation over a long period.

Table 1: Wildlife emotion and their outward indicators

Neural emotion state	Outward indicators
Joy (play)	Hooping, kicking legs into the air, boxing with kin, chasing kin, eye expression
Separation, distress (panic)	Vocal, running into objects in panic, eye expression, erect and extended posture, licking forearms, rapid respiratory rate, flared nostrils.
Nurturance (care)	Preening, embracing kin, body contact, protective behaviour by dominant males
Sexuality (lust)	Courtship behaviour, pairing, long-term male/female friendships
Anger (rage)	Vocal, eye expression, posture

Relaxation      Lying on back asleep, mothers relaxing pouch muscle, mothers allowing small infants to exercise outside pouch

Source: Adapted from Garlick and Austen (2012a, 2012b and 2014b)

In our earlier work on post-traumatic stress disorder (PTSD) in kangaroos (Garlick and Austen 2014b), we found these emotional indicators helpful in identifying acute cases of stress disorder due to a lack of care and support when faced with life threatening situations. For the in-care kangaroo with acute stress we have found strong one-on-one carer input, having a kangaroo buddy or soul mate, together with some judicious use of medication such as Diazepam and Fluphenazine will aid the recovery.

#### 4.      Relational learning

The experience of relational learning among humans provides a useful model for exploring the relationship between a wild animal undergoing rehabilitation and the care-giver. It allows the co-construction of knowledge through an evolving emotional engagement between the cared-for and the care-giver (Nodding 1989, 2002).

“What is “relational learning,” if not an exchange [between humans and between humans and non-humans] that is grounded in love?

“If there are to be schools at all—and the arguments against them grow more compelling every day—then certainly their justification has to begin with their serving as safe, caring environments where kids can learn from and about each other, where they can establish enduring relationships with teachers and mentor figures, and where can they experience the interconnectedness of all life on a daily basis.” (Chris Mercogliano <http://www.educationrevolution.org/blog/relational-learning-say-what/#sthash.CxuwtpdD.dpuf>)

Bingham and Sidorkin (No Education without Relation, 2004) suggest that relational learning is an epistemology of association that generates much more knowledge than can be achieved by simply bringing players (learners) together. The latter is simply the ‘being-alongside’ act of togetherness rather than the ‘being-for’ act of togetherness identified by Bauman (1995). It involves the transformative learning effect of friendship.

“Why do schools remain? They remain because education is not mainly about the facts that students stuff into their heads. They remain because education is not mainly about developing thinking skills. It is not about gaining knowledge. Schools remain because education is primarily about human beings who need to meet together, as a group of people, if learning is to take place. In schools, it is true that we meet and it is true that we learn. But the fog over education has kept us from realizing that learning is primarily about human beings who meet. Meeting and learning are inseparable.

So the fog must arise. We must learn to meet. Why? Because we must meet to learn.” (Bingham and Sidorkin, p 6).

## **5. Trans-species psychology**

Humans and other animals share a common capacity to think, feel, and experience themselves and their lives. Some mammals have demonstrated the ability to experience empathy, culture, self-awareness, consciousness, psychological trauma, mourning rituals, and complex communication abilities (Bradshaw 2009, 2012 and Cambridge Declaration on Consciousness 2012).

The knowledge that nonhuman animals have the ability to think and feel in complex ways has also brought an understanding of their capacity to experience psychological trauma and suffering. Trans-species psychology seeks to prevent and treat trauma in all animals through increased scientific understanding (Bradshaw 2009). The research on the experience and treatment of animals with post-traumatic stress disorder (PTSD) is an example of this (Bradshaw 2011, 2012 and Garlick and Austen 2014b).

The path-breaking PTSD assessment work of Bradshaw on elephants, parrots and chimpanzees to date is significant in highlighting psychological disorders in captive wild animals. Our work on PTSD in kangaroos (Garlick and Austen 2014b) supports the conclusions of Bradshaw. We found strong one-on-one carer engagement and input, having a kangaroo soul-mate, and the judicious use of calmative medication will aid recovery from PTSD. These findings are consistent with Bradshaw's conclusion that it is important to '...create social and ecological habitats that support psychological recovery and wellbeing'. She says its important that animals feel they have a '...secure sense of self and competence within their environmental sphere'. Kangaroos have strong social bonds within their mob and therefore attachment is a significant part of their psychological make-up.

## **6. Cognitive justice**

The notion of cognitive justice and the democratisation of knowledge across all sectors (Visvanathan 1997, 2002 and 2009; Santos 2007) is a humanist concept we can borrow to signify the importance of regarding the innate and experiential knowledge of animals, and the existence of Animal Knowledge Systems (AKS), in helping to understand questions of wildlife rehabilitation.

Cognitive justice was coined by Visvanathan to represent the need for a plurality of knowledge sources and processes to offset the restrictive culture of traditional 'elite' human science analysis. It is an ethical principle that equally values diverse sources of knowledge (knowers) without drawing conclusions about relative knowledge superiority.

For Visvanathan cognitive justice recognises the right of different forms of knowledge from diverse ways of life to coexist.

([http://www.indiaseminar.com/2009/597/597\\_shiv\\_visvanathan.htm](http://www.indiaseminar.com/2009/597/597_shiv_visvanathan.htm)).

## **7. Trans-species learning with the kangaroo and case studies in recovery**

At our wildlife recovery centre we have around 250 injured and sick macropods (mostly kangaroos), wombats and possums coming into care each year. These animals range in size from the tiny (several hundred grams) to the very large (60kgs). They have a variety of injuries that include limb, pelvic and skull fractures, severe wounds including puncture wounds, and head injuries, as well as serious issues like pneumonia and stress-induced illnesses.

Recovery of an injured macropod may take up to 12 months or more depending on the extent of the injury or illness. Trust, kindness and appropriate auditory, olfactory and visual and tactile communication between the injured or sick wild animal and the human carer are vital over potential lengthy periods to enable a successful outcome. An attitude of respect, encouragement and persistence is as important for the injured animal as appropriate veterinary treatment.

Understanding animal communication through close and sensitive observation and interaction form an important basis for having good relations with injured wild animals, for monitoring their emotional state and changing their recovery treatment regime when needed.

In each of the cases presented below the care regime has been changed to accord with our understanding of the emotional state of the animal as revealed through the engagement experience. Care variables include: safety and security, companionship, affection, familiarity, nutrition, pain relief, antibiotics, fluids, physiotherapy, exercise, grooming, rest and comfort.

### **Case studies in recovery**

#### **Linsey**

A 20kg female kangaroo found by the roadside with fractured pelvis, concussion, corneal abrasion and fracture dislocation of the elbow. Many kangaroos and other wildlife come to us with concussion, injuries to the pelvis and limbs. Most of these animals recover fully with an appropriate care regime.

Linsey was kept indoors for several months and because of her personality she was happy to lie on a mattress, have her bedding changed daily and rolled twice a day to prevent pressure sores. She was closely associated with an in-care mother and her 3kg joey. The bond with these animals helped with Lindsey's recovery.

There was a lot of interaction between Linsey and her care-giver. As she recovered she had physiotherapy and standing practice. She has been in care for six months and will be released in Spring.

## **Tulley**

Tulley was a five kg kangaroo found with a deformed leg due to a slipped achilles tendon whilst in his mother's pouch. When found he was emaciated, frightened and had fox attack wounds to the head and neck and had an ulcerated ankle due to hopping on the deformity. Initially we thought he would die from myopathy but he recovered well with our usual treatment for myopathy (fluids, Diazepam, Vitamine E/ Selenium). Tulley was happy to stay in a bag. A swab was taken of the ulcerated heel and he was treated with antibiotics for several weeks prior to the orthopaedic surgery to correct the ankle deformity.

Tulley got lots of interaction with his care-giver and now four weeks after surgery he is mobile and happy to explore the small enclosure and engage with other joeys of similar age.

## **Woolly**

Woolly is a 15kg male kangaroo that was chased and grabbed by the neck and shaken by a large dog, fell into a cold creek and was rescued by a member of the public. Woolly had subcutaneous fluids, antibiotics, dexamethosone, pain relief and vitamine E/ selenium and was treated for hypothermia, puncture wounds, concussion and myopathy. Due to the swelling around the head he was initially syringe fed. While initial care revolved around the acute problems it then shifted to nutrition and stress reduction through carer interaction.

## **Weetallabah**

Weetallabah is a 25kg kangaroo who was caught by one leg in a fence. She lost her joey of around 3kg. She was treated for myopathy with subcutaneous fluids, vitamine E/ selenium, Diazepam, Fluphenazine, and antibiotics. Her wounds were cleaned and dressed. Initially she was kept inside and after a while was given standing practice and had a lot of carer interaction including physiotherapy.

## **Magooly**

Magooly was a 25 kg kangaroo that had become entangled in fencing wire. The wire had become embedded in his groin, thigh, abdomen and tail. He had to be darted to be rescued. Once the wire had been removed, thousands of maggots had to be washed out. His wounds were cleaned regularly. He was commenced on antibiotics, subcutaneous fluids and pain relief. An attempt was made to close the wounds however the tension on the sutures was too great. The wounds eventually healed with continuous treatment. Antibiotics continued for several weeks.

Initially Magooly could not get up. He was kept inside because his wounds were open and so as to build a bond with the care-giver. Eventually, Magooly recovered well enough to join the mob in the enclosure. We expect him to be released in spring.

## **Bea**

Bea was a 12kg kangaroo caught by both legs in a wire fence. She was treated for myopathy with subcutaneous fluids, vitamin E/ selenium and Diazepam and it was a long time before she could stand. In trying to stand she had rubbed the skin on her elbows and knees so they had to be padded. She also needed padding on the thighs where she was developing a pressure area.

As she became stronger she was given regular standing exercises until she could stand alone. As she became mobile she had ongoing carer attention to ensure she could be easily accessed for treatment when she moved into the enclosures for exercise.

## **8. Conclusions**

In this paper we have been concerned to move beyond an understanding of the psychology of trans-species relations with wild animals to one where such engagement can be a learning experience for the animal and the human carer so as to more effectively aid the recovery process for the in-care wild animal. We have termed this trans-species learning.

We use the emotional state of a wild animal to guide us in the kind of engagement we have as carers. We do this so that we might fine tune the physical and social care we provide during the recovery process. It is also useful in so much that the in-care animal also understands the benefit of the treatment being given and is less stressful in receiving it. Earlier we have used this approach to assist kangaroos suffering PTSD, however it is equally useful for assisting the wild animal recovering from various acute physical problems such as injuries as well as psychological ones. We have found it a particularly helpful practice in helping in the recovery of seriously injured kangaroos.

## **References**

- Bauman, Z. 1995. *Life in fragments: Essays in postmodern morality*. Oxford, Cambridge: Blackwell Publishers.
- Bingham, C. and Sodorkin, A. 2004. *No Education without Relation*. New York: Peter Lang Publishing.
- Bradshaw, G. 2007. 'Elephants in captivity: Analysis of practice, policy and the future', *Society and Animals*: 1-48.
- Bradshaw, G. 2009. 'The World of Trans-species Psychology'. *Psychology Today*.  
<https://www.psychologytoday.com/blog/bear-in-mind/200910/the-world-trans-species-psychology>.
- Bradshaw, G. 2012. *Elephants on the edge: What animals teach us about humanity*. New haven: Yale University Press.
- Bradshaw, G. 2011. 'Why the caged bird does not sing'. *Psychology Today*. Bradshaw, G. 2014. 'Elephants, Us and Other Kin'.  
<http://www.youtube.com/watch?v=1JB1XCbBJQs&feature=youtube> (accessed 11/ 07/ 2016).
- Bradshaw, G. et al. 2011. 'The Bioethics of Great Ape Well-being. Psychiatric injury and duty of care.'

Animals and Society.

Bradshaw, G. Yenkosky, J. McCarthy, E. 2009. 'Avian effective dysregulation: Psychiatric models and treatment for parrots in captivity.' Proceedings of the Association of Avian Veterinarians, 28th Annual Conference, Minnesota.

Cambridge Declaration on Consciousness 2012.

<https://fcmconference.org/img/CambridgeDeclarationOnConsciousness.pdf>

Derrida, J. 2008. The animal that therefore I am (D.Wills, Trans. Vol. Perspectives in Continental Philosophy). New York: Fordham University Press.

Franks, D. 2010. Neurosociology: The nexus between neuroscience and social psychology. New York: Springer.

Garlick, S. 2014. 'Learning from wildlife emotion: A lacuna in our knowledge of environmental sustainability'. Chapter 14 in Sustainability frontiers: Critical and Transformative Voices from the Borderlands of Sustainability Education. Barbara Budrich Publishers.

Garlick, S and Austen, R. 2010. 'Kangaroo translocation: Program efficiency and welfare goals.' Paper presented at the Australian Wildlife Rehabilitation Conference, Adelaide, South Australia.

Garlick, S and Austen, R. 2012a. 'Learning about the emotional lives of Kangaroos and environmental sustainability'. Minding Animals Conference, Utrecht, Netherlands.

Garlick, S and Austen, R. 2012b. 'The emotional lives of kangaroos: Rehabilitation science and the environment.' Paper presented to the Australian Wildlife Rehabilitation Conference, Townsville, Queensland.

Garlick, S and Austen, R. 2014a. 'Learning about the emotional lives of kangaroos, cognitive justice and environmental sustainability'. Journal of Relations: beyond Anthropocentrism. 2 (1).

Garlick, S. and Austen, R. 2014b. 'Post-Traumatic Stress Disorder in Kangaroos'. Paper presented to the

Australian Wildlife Rehabilitation Conference, Hobart, Tasmania.

Kheel, M. 2008. Nature Ethics: An ecofeminist perspective. New York, Rowman and Littlefield Publishers.

Mercogliano, C. 2016. Relational Learning...Say What?

<http://www.educationrevolution.org/blog/relational-learning-say-what/> Accessed 12/ 7/2016.

Nodding, N. 1984. Caring: A feminine approach to ethics and moral education. Berkeley: University of California Press.

Nodding, N. 2002. Starting at Home. Caring and social policy, Berkeley, University of California Press.

Panksepp, J. 1998. *Affective neuroscience: The foundations of human and animal emotions*. London: Oxford University Press.

Panksepp, J. 2004. *Affective consciousness: Core emotional feelings in humans and animals*. London: Oxford University Press.

Plumwood, V. 1993. *Feminism and the Mastery of Nature*. New York: Routledge.

Santos, B. de S (Ed). 2007. *Cognitive Justice in a Global World: Prudent Knowledges for a Decent Life*. Lanham: Lexington.

Sharpe, L. 2005. *Creatures like us?* Imprint Academic, Exeter, UK.

Visvanathan, S. 1997. *A Carnival for Science: Essays on science, technology and development*. London: Oxford University Press.

Visvanathan, S. 2002. "The future of science studies", *Futures*, 34: 91-101.

Visvanathan, S. 2009. "The search for cognitive justice." [http://www.india-seminar.com/2009/597/597\\_shiv\\_visvanathan.htm](http://www.india-seminar.com/2009/597/597_shiv_visvanathan.htm).