

Man meets dog: surviving and evolving together

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INTRODUCTION

Imagine human life without cats and dogs. It's really difficult. We take them for granted. They inhabit our landscapes, permeate our cultural images, wander through our stories, take part in our conversations and even invade our language. Think of every single metaphor, every adjective, which has something to do with dogs or cats and then try to think of how many days of your life you get through without using one of them. There aren't many - even if it's just a pause to mentally call someone an S... O... B...

Our lives would be very different if they weren't there. Yet, despite this, public policy has for some reason tended to ignore them. Look through all the major strategies and public policy documents which shape our cities and spot how many references there are to the animals we now call companions. Virtually none. It's as if they don't exist.

The consequences of this oversight are already beginning to be felt. Urban consolidation means that more people are squeezed into a smaller amount of space, but it also means more of their co-habitators, the cats and dogs who live with them, are squeezed in as well. The results of failing to plan for the needs of animals when designing high density housing or open space are more than familiar to everyone involved in UAM.

Fortunately this is changing and forces such as the urban animal management conferences are helping to drive that change. I know that I don't need to convince anyone attending this conference of the importance of companion animals to the community, nor of the need to broaden our policy approach to UAM. But what I would like to do is help us to understand *why* it is important.

Our association with these animals has several dimensions. Cultural, historical, and most importantly, biological. It is the latter element, the biological dimension, which is perhaps least understood and therefore, I think, of most interest. We are not separate entities but part of a biological unit. Cats and dogs have evolved with us - and the whole shape of human communities would not be the same had they not.

The fact is, cities in Australia are not just multicultural, but multi species as well

HOW IT ALL BEGAN

To properly understand why we live in these mixed species communities, we have to start a long way back. More than 12,000 years ago or even, as David Paxton has suggested, as far back as 40,000 years ago. A time when our human ancestors were living as hunter gatherers. When the whole concept of agriculture, technology beyond that of a stone axe, even cities, was thousands of years away. It was somewhere in this distant period that humanity's fortunes became linked with those of another species. *Canis lupus*, as it would have been originally; the wolf who eventually evolved to become the dog.

The traditional story of how this happened is that of 'Man Tames The Wolf'. Konrad Lorenz, Nobel prize winner and founder of the science of animal behaviour or ethology, wrote an influential book in the early fifties called *Man Meets Dog*. In it, he described a scenario where a small band of Homo sapiens deliberately puts food out to attract a group of jackals to the camp fire (at this stage Lorenz was under the mistaken impression dogs were descended from jackals). This was so they would help protect the vulnerable humans from predators. Later, the animals followed the men out on the hunt, and so the perfect hunting partnership was created. It's a beautifully written tale and it is Lorenz's vivid story which has informed popular opinion ever since.

But for some years scholars have been questioning this anthropocentric view. It now seems that as much as our 'clever' ancestors chose the dog, the dog 'chose' us. They were invaders; and there wasn't necessarily much we could do about it.

At some stage in our pre-history *Homo sapiens* had crossed the boundary to become ecologically dominant. They were developing the superior organisation and communication skills which would eventually lead to language, art and technology. They had also started forming home camps or bases and were actively sharing in the collection and consumption of food. In the process a new niche was formed, one which could be exploited by other animal opportunists.

Rather than being brought back to the camp and 'tamed', wolves may have merely infested human habitations, taking advantage of the new energy source provided - along with rats, mice and others. Initially, they perhaps weren't even interested in the human settlements themselves. American biologist Raymond Coppinger has suggested that village dumps were the attraction, pointing to studies which show that in Italy, even today, the dump is the primary food source for the local wolf and unowned dog populations. The villagers tend to be unaware of this, as the feeding occurs at night, and there is a wonderful story of a researcher turning on a spotlight at two in the morning to reveal a wolf, caught with his mouth full of spaghetti.

The 'taming' of these animals would have occurred initially with very little influence from humans. Only those animals which were least fearful of humans, least likely to run away, would have been able to get close enough for long enough to exploit the niche. There was a natural selection, a separation of wolves into the more and less 'tame'. Perhaps by the time the humans were even consciously aware of their presence, they were already living right next to a semi-domesticated set of canids. Later, as the animals started to enter the human dwellings, all it needed was for the more aggressive animals to be driven off or killed for the selection for friendliness to gain an added boost.

A remarkable experiment conducted over forty years in Siberia, Russia, has shown just how powerful this process is. In efforts to duplicate domestication, researchers started with a large group of wild foxes. They then started selecting the breeding stock for each generation on one basis only - tameness. To their surprise, within a few years, not only did they start to see foxes which wagged their tails and came to the front of the cage at the approach of humans, but they also saw changes in coat colour and a shortening in the breeding cycle from once to twice a year. Just like dogs.

The process by which this occurred is called 'neotenisation' or the retention of juvenile characteristics into adulthood. It's a powerful evolutionary force, and one which is thought to have been a major contributor to the evolution of our own species, *Homo sapiens*.

Australian scholar David Paxton shares the view that the original wolf/dogs were scavengers. He believes this scenario need not be confined to the advent of villages, which as far as we can tell were not formed until around 14,000 years ago. He believes that scavenging canids may have been living near and following human camps thousands of years earlier, perhaps even as early as 40,000 years ago. This was the time when it is thought we developed language and when we still shared the planet with another species of hominid, *Homo neanderthalis*.

He further suggests that as the process progressed, far from it being a one sided bargain, humans gained an unconscious benefit as well. Something started to happen which gave those human groups which were infested or associated with scavenging canids a competitive edge over those which were not.

The clue to this, according to Paxton, is that modern humans have such a rotten sense of smell, especially compared with most higher mammals. It does seem a bit odd that our ancestors were able to do so well without such an important sense, particularly when you consider they were for a long time almost as likely to be the lunch-ee as the lunch-er. Canids of course, have a superb sense of smell and more acute hearing as well. Paxton contends that at some point, these semi-tame wolves or dogs more or less 'took over' these functions. It didn't matter if we 'lost' what little there was of our sense of smell because someone else was already doing the job for us. An olfactory prosthesis. Furthermore, communities infested by dogs also gained a 'hearing aid' an early warning system which alerted them to the approach of predators or rival tribes.

It is not hard to see from this picture how mixed species communities were more likely to prevail in times of competition for resources than those which were not. You don't have to imagine any affection between the humans and canids, you don't even have to assume that they lived directly with each other. All you have to imagine is the resounding clamour of an alerted group of loosely associated wolves to see how the benefits for both species would have accrued.

The earliest domestication of dogs was not a cultural event initiated by clever humans but a biological one. In a sense it was a co-domestication. Or, as scientists such as the renowned zoo-archaeologist Juliet Clutton Brock have referred to it, a symbiosis.

Paxton prefers to describe it as a 'genetic contract'. We traded a habitat, including rights to share in our intellectual property and technology, in return for their superb senses of hearing and smell.

EVOLVING TOGETHER

What happened next? The fossil record tells us that by 12,000 years ago the process was more or less complete. A relationship had formed between the two species which involved sharing their homes and, it seems, their affections. The reason 12,000 BP is often cited as the time of dog domestication is that a striking set of fossils in what is now Israel have been dated at that age. The find involves the skeleton of an elderly woman with her hand on the body of a five month old puppy. No one who has seen it has any doubts about the nature of that bond.

There are actually a number of dog like fossils across the world dated at that period. They are distinguished from the remains of their wild wolf cousins on the basis of the size and shape of the skull; reduced in the initial stages of domestication. However, this is not to say that the association could not have started much much earlier - it's just that it would be impossible to distinguish a wild wolf from a semi-tame one on skeletal grounds alone.

What is fascinating is that most human communities had them. The earliest finds of dogs in North America date from more than 8,500 years ago - not long after humans arrived there. There is no reason to think that they didn't bring dogs with them when they crossed the Bering Strait around 12,000 years ago. The homes of Amazonian tribes in South America were found by explorers to contain dogs, even though they contained no other domesticated animals. When the Maoris colonised New Zealand a thousand years ago they took their dogs with them (although admittedly they did subsequently eat them all when faced with a nutritional crisis). Today it is impossible to think of a single human community which does not contain dogs. Or, for that matter, to think of a single, self supporting dog community (barring the dingo) which lives without people. It all adds credence to the proposal that over the last 12,000 years and more, what the world has witnessed is a genuine co-evolution of humans and dogs.

Dogs were the first, but other animals followed - sheep, goats, cats, pigs, cattle and horses - all domesticated in the last 10,000 years. They took an evolutionary route which, while probably not leading to as close an affiliation as human and dog, nevertheless saw their paths permanently entwined with our own. As scientists such as Jared Diamond have noted, animals were essential in humanity's 'rise to civilisation'. It's worth remembering that it's only in the last two centuries that the horse has been replaced as the major mode of transportation and, even today, many parts of the world are as dependent on animals for their economy as ever were our ancestors.

Jared Diamond claims that without the biological process of domestication for which dogs provided the original model, today we would still be living as our hunter gatherer ancestors did 14,000 years before now. Domestic animals *were* the energy source which enabled our technology; drove our ploughs, clothed our communities and decided wars.

That's all very well, but the question has to be asked: why are they *still* here? In modern western cities, particularly Australian ones, virtually none of the original functional reasons for living with animals remain. Certainly many domestic animals have fallen by the wayside, relegated to the 'country' where the people *don't* live. (Well - most Australians don't live there, anyway.) Yet a few species, notably the dog and the cat, have for some reason moved to the cities with us.

PETS MAKE YOU HEALTHY

For a long time, this seeming anomaly went unnoticed. Companion animals were taken for granted and weren't really considered fit subjects for 'serious' scientific study.

Then in the 1960's psychiatrist Boris Levinson was the first to alert the medical community to the possibility there was a bit more to it. In a now famous incident, Levinson, who primarily worked with autistic children, was treating a boy with whom even after six months he was having difficulty establishing any communication. One day, on a whim, he brought his dog Jingles in to work. For the first time he was able to forge a link with the boy and the rest, as they say, is history.

Since then, thousands of studies have shown the benefits of using animals in various therapeutic situations, including Aaron Katcher's recent work on children with Attention Deficit Hyperactive Disorder Syndrome and Mara Baun's substantial study of persons with Alzheimer's disease. Salmon and Salmon's 1981 report "A Dog in Residence" was the first Australian work to examine the benefits of keeping dog in a hospice and Crowley et al's (1995) eighteen month examination of an animal in residence program found that residents showed significant reduction in tension, confusion and fatigue.

But the work which has really made the medical community pay attention is in the area of cardiovascular disease. In the early 1980's, Erika Friedman made the discovery that simply touching a dog caused your blood pressure to drop. Then, more strikingly, Dr Friedman decided to analyse the factors associated with survival following a heart attack. Remarkably, she found her 77 subjects were more likely to still be alive one year later if they had a pet. In 1995 Friedman reaffirmed her original findings with a substantial sample group of 365.

Perhaps the most convincing evidence came in 1992 with the publication of the Baker Medical Research Institute's work on risk factors for heart disease. Drs Anderson, Jennings and Reid examined 5,741 people visiting their risk assessment clinic and found that cat and dog owners had a lower risk of heart disease, including lower blood pressure, blood cholesterol, and triglyceride fats. They calculated the difference amounted to a 4% reduction in risk, or equivalent to starting a low fat, low salt diet. This was despite the fact pet owners actually drank more alcohol!

It seems pets also influence your general health and wellbeing. English researcher Dr James Serpell in 1991 gave around 100 people a questionnaire scoring their overall health, asking about headaches, hayfever, sleepless nights, colds, tiredness and so on. He then divided them into three groups, giving one group a cat, one a dog and leaving the third as a control. Within a month the pet owning group were reporting significantly fewer incidences of minor illnesses and complaints and, while the differences between the groups became less marked with time, the improvement persisted through the ten months of the study. This is the best evidence to date that pet ownership is not simply correlational with better health but may actually cause it.

The significance of these findings for the health of Australians is substantial. A national survey was conducted in 1995 to investigate Australian pet ownership. Not only did it find that pet owners are less likely to take medication for complaints such as high blood pressure, sleeping difficulties or a heart problem, but they actually visit the doctor significantly less often; 4.4 times a year as opposed to 5 for their petless counterparts. With this information Professors Anderson and Headey estimated the impact pet ownership has on Australia's total annual health services expenditure. Their preliminary results indicate pet ownership may save the country between \$790 million and \$1.5 billion annually.

Pet ownership is undoubtedly good for us - or are we looking at this the wrong way round? Perhaps what the data are really telling us is that an absence of companion animals is bad for us.

COMMUNICATION AND CULTURE

The research into the health benefits we gain from pets gives us one view of why companion animals are still with us. There are others. Perhaps one of the more telling explanations for why we brought animals into our cities is that it simply didn't occur to us to leave them behind.

It is really quite remarkable how much we communicate with cats and dogs. If pressed, any pet owner will sheepishly admit to spending hours chatting to their animal companions - asking them what they want for dinner, teasing them about 'girlfriends'. Veteran human-animal interactions researchers Katcher and Beck have studied our 'tendency to speak discursively with animals' - apparently we even insert pauses for our companions to 'reply'.

Of course this type of fantasy dialogue is really a bit of a side issue. The real communication between humans and cats or dogs is for the most part non-verbal. What is remarkable is not so much that cats and dogs communicate but how readily we, an entirely different species, can understand.

Ethologists are only now starting to examine the possibility that a new 'language' of sorts has evolved to aid co-habitation between human and dog, or cat. Taking the co-evolutionary model of the association of human and dog, it stands to reason that, over the thousands of years we've been living closely together, there would be considerable selection pressure, both cultural and genetic, to improve communication. It's certainly a great advantage if a human can tell her dog to go round the back, drop, and then quietly nudge forward a herd of sheep - such a dog is more likely to survive and breed. Similarly those dogs which somehow convince humans to feed them regularly, such as by appealing to human emotions, are obviously going to be better off. Researchers have found that indeed there are differences between signalling behaviours of wolf to wolf and dog to dog, or dog to human. Even cats seem to modify their signals in the presence of humans, combining other signals with a 'tail up' approach which turns messages into affiliative or 'friendly' ones. As ethologist Dr John Bradshaw stated in his plenary address to the Geneva conference, it's not as if we humans could have taught dogs to do anything they hadn't already shown us. In a sense, he says, dogs 'co-authored' the pages of training manuals.

This is not to say that we don't frequently get it wrong; overly interpreting what we see in terms of what *we* would mean by it (anthropomorphism). The dogs make mistakes as well, a classic example being their misinterpretation of the boisterous approach of a young child as an act of aggression. But it's undeniable that for the most part we are able to live together with a workable degree of cooperation and understanding. Our shared 'language' serves us pretty well.

Animals also invade our language in other ways - they are inextricably interwoven with human culture. It's hard to imagine what our art, advertising, fables, even conversation, would be like without animals present. It's interesting that in a survey of books used to teach Western children language skills, over 94% used animals as their base. Even in those cultures where the association with urban animals is less formalised and dogs and humans co-exist without perceived 'ownership', animal metaphor and symbolism abounds.

In the process of evolving into the niche of human settlements cats and dogs have developed new languages and new behaviours. Many of these speak to our emotions because it was those animals which made us care *about* them which were most likely to earn our care. The result is that in some cases they are our partners, in others our friends. No wonder we didn't leave them behind

ADAPTING TO CITY LIFE - CAN WE DO IT ALONE?

The urbanisation explosion is new - only a few hundred years old. Today there are 5.75 billion people living in the world and 45% of them live in cities. Current models developed by the International Institute for Applied Systems Analysis predict that within a hundred years our population will reach 11.5 billion and two thirds will be living in cities. No one really knows what this all means.

Undeniably it is a time of rapid adaptation for our species. Quite apart from the need to find solutions to the threats posed our biosphere, on an individual level we are learning to live in a very different way. Separated from communities by walls and fences, restricted in our ability to roam and directly interact with 'the natural', and increasingly living in small family units of one and two persons, various dire predictions have been made of the effect this will have on our African savannah derived psyches. Yet we must learn to cope.

Pet ownership as the dominant form of interaction with cats and dogs in the western world is relatively new - in the past companionship tended to be mixed in with function or 'usefulness'. Yet today in Australia, one of the most highly urbanised cultures in the world, sixty six percent of households 'own' a pet.

A couple of reasons have been given why that might be so. But if you look at where we've been and where we're going the intriguing possibility arises that companion animals are not simply with us for historical reasons, but rather are still playing an ongoing adaptive role. The original reasons for encouraging cats and dogs in our midst are largely irrelevant in cities. Perhaps new roles, equally important to our own future, have taken over.

ZERO POPULATION GROWTH

One of the hallmarks of humanity is the strength of our nurturing drive. In no other species do the offspring remain pre-pubertal and essentially dependent on their elders for a decade or more. Powerful forces must be at work to ensure the bond doesn't break. We could ill afford as a species to abandon our children after five years, a decade, or longer. Empathy and the tendency to nurture the young or weak are strongly hardwired motivators of humanity. So how are we supposed to deal with asking people not to have kids?

As Katcher and Beck have pointed out, at no time in history have societies been more deprived of opportunities for nurturing. We *must* stabilise our population if we are to avoid the various dooms predicted for us. It means that some people won't have any kids. Even those that do will likely only have one or two and children aren't young and dependant for very long. Extended family structures are almost a thing of the past in Australia. Grandparents rarely live in multigenerational households, so exposure to children is even more limited. The windows of opportunity for direct caring of the young are very narrow - and close abruptly.

The strength of the nurturing instinct was probably responsible for the first crossing, from the outside to the inside of the home, necessary for pet ownership. There are many examples in pre-industrial cultures of women bringing puppies or piglets into the house as 'pets'. Of course not every one has such a strong nurturing drive but, within any population, there is going to be significant proportion in which the nurturing drive is so strong that, if not expressed, it literally makes people ill. The phenomenon of the working, childless woman who feeds her cats smoked salmon and stays home when they are sick is widely derided in the popular press. Yet what we are seeing here is perhaps not pathological at all, but rather a logical adaptive response to the pressures of controlling our population.

CONCEPTUAL SPACE AND VIRTUAL EMOTIONS

Failing to meet our nurturing instincts is not the only challenge facing us in our adjustment to city life. There's the small problem of space as well.

Animals tend to have an optimal group size which, if overstretched, can produce stress. The problem for humans is that we've far exceeded any notion of optimal density. In some parts of the world we cram humans into spaces that to an outsider seem pathological. One of the ways we have been able to adapt to excessive numbers is that we've made use of a new kind of space. Conceptual space.

Many things could be viewed as contributing to conceptual space. The television is one tool. Pictures of landscapes, window views - they're all at a premium in busy offices and the rows of desperate little pot plants in high rise windows confirm our deep seated need for contact with expanses filled with the colours of life.

Like the dreaded pot plant, our companion animals form a gateway to another place and existence. Not only do they directly connect us with the 'natural world' (which is always hard to access from the sofa), but our powers of empathy are such that we can almost tangibly experience *their* space. People love watching their dog race joyously around the park or leap enthusiastically into the water and shake it all over everyone. Cats tearing playfully around the house or purring with obvious pleasure make *us* feel good. Why? It's not simply that we are pleased our friends are happy, although naturally that plays a role. But at times it often seems as if we can just switch off our own concerns and subsume ourselves entirely into *their* sensorial world.

This point has fundamental implications for urban policy makers who often seem bent on restricting the ability of animals to run free, when it is precisely this freedom that humans so clearly value. It explains why compliance with leash laws is always low. Cats and dogs do more than provide us with extra space - they give us virtual emotions as well.

LONELINESS

The final challenge we face in our adaptation to city life seems paradoxical. At a time when population density is still increasing the size of the Australian family unit is dropping substantially. Over a period of 1982 to 1993 the number of single person households rose by 35%. One in five households are single person units. Loneliness, the scourge of the disconnected, seems bound to increase.

The Australian population is also aging - and without the benefit of the live-in support networks common to other cultures and other times. In 1994 16% of Australians were over the age of 65. By the year 2030 it is projected that figure will be 25% - fully a quarter of our population. Much has been written about planning for the economic and social ramifications, particularly in providing adequate healthcare and income support. This is another area where the role of the companion animal has probably been underrated.

Levinson himself was the first to remark on the fact that animals seem to act as a kind of 'social facilitator' - an unthreatening bridge between patient and therapist. Intrigued by the observation that 'pets help you meet people', zoologist Peter Messent counted the number and nature of social interactions people had in a park if they walked first with and then without a dog. To put the results simply - people say hello if you have a dog. Lynnette Hart has shown that this 'icebreaking' effect is even more important for people with disabilities and helps normalise their social interactions. In the 1995 Australian National People and Pets Survey, pet owners who lived alone reported feeling less lonely than those without pets.

It's also intriguing to reflect on the place pets have now assumed in communal story telling. Try telling an animal anecdote at a dinner party and be resigned to the fact that the next hour will be lost to everyone relating their favourite animal incident. As one friend put it - pet stories propagate.

Of course the impact pets may have on our human social networks is probably nothing compared to the companionship the animals themselves provide. The unique relationship we've formed with the animals we've lived with for so many millennia contains an emotional dimension. The bond doesn't replace human companionship because it's quite different. But in many cases it's as important and, in some instances, preferred.

Given all of this you may be intrigued to know which is the lowest dog owning group in our community, with an incidence of 19% of households (compared to a 42% average overall). It's retired people living alone.

SAVING THE URBAN SEXTIPEDE

Our relationship with the animals which, in Australia, we call companions is far more complex than most people realise. We have a long history together - a history which has changed both of us and which would have been quite different had we never met. Not only did we evolve together but one could argue that we are still evolving together. In the Western world at least, animals have a key role in helping us adapt to a future where more people will be alive than at any previous point in our history. Yet many will have less direct human to human contact than at any time in our past. Does it not then seem strange that this relationship may be under threat?

The 1960's saw the rise of the post modern approach to urban design and a recognition that cities are the habitat of an urban animal - the human. The change has been welcomed. However, with the exception perhaps of 'wildlife' in parks, the fact that there are other urban animals living in cities has so far been completely overlooked.

No more is this evident than in the case of public open space. It has been recognised that parks play an important biological and social role in human lives, but to date the equally important role they play in the lives of dogs has been largely overlooked. Dogs need exercise and, being a social species like ourselves, they also need the opportunity to mix with others. Who knows - perhaps they even get some sort of psychological boost out of being outside on a lovely day (they certainly seem to). What's more, with the demise of private open space and the decline of the traditional backyard, the pressure put on parks as an outlet for the biological needs of both species is actually increased. Yet, until the very recent work of Virginia Jackson, nowhere in any of the texts on open space planning were their needs even discussed.

The urban squeeze is coming from both ends and, if we're not careful, the urban animal will be squeezed out in the process. Ad hoc responses to dogs mean that dog-human partnerships can be systematically discriminated against without anyone noticing until it is too late.

It is not that high density living of itself necessarily threatens the interaction of animals and people - in cultures where the pet ownership paradigm is irrelevant, animals and humans still loosely co-exist even in what one might consider pathologically crowded conditions. But in our culture, where every animal must have a human patron or be euthanised, the threat is clear. You only have to compare the numbers of dogs owned in England with those in Australia, countries of broadly similar cultural mix but differing densities. It's 25% of English households as opposed to 42% here.

Rental agreements and bodies corporate compound the problem. They are not passively but actively discriminatory towards urban animals. Most opt for a 'no pets' clause. And this trend is impacting most heavily on precisely the wrong group. Small dwellings and rentals are preferred by people who live in pairs or alone - exactly the group most likely to benefit from animal companionship. Housing concerns are undoubtedly major contributing factors to the counter-intuitively low levels of pet ownership seen in the over 65 age group. As our population ages until fully a quarter of the population is over 65, the disparity can only become more obvious.

It is early stages yet, and we are really only looking at warning signs, but to see the potential impact housing policy has on pet ownership you only have to look at the reasons Australians currently give for not owning a pet. It's not because they don't want them - only 2% of those surveyed in National People and Pets said they don't like pets. The number one reason given for not having a pet is restrictions due to housing.

Sharing our cities with other animals - cats, dogs, birds, fish - is not without its problems. Barking dogs, faecal disposal and managing potentially aggressive dog interactions in the public arena are the most common of concerns of local government and there are others. But if we look for monodimensional explanations for what are clearly multifactorial issues, policies will never be adequate. As urban policy analyst Virginia Jackson has pointed out in her study 'Pets in Urban Areas', the successful integration of companion animals into cities is dependent on the complex interaction of dog, owner and environment.

David Paxton has found a term which encompasses the new approach proposed. An approach which recognises that the bond between humans and their animal companions is an ancient and a necessary one. The human-animal partnership should be formally recognised as a single, and indivisible, unit. The Urban Sextipede.

Policies based on the Urban Sextipede would ensure that parks are planned so they encourage the enjoyment of people and their dogs whilst using good design to better integrate all park users. They would see that dog faecal deposits are not a sin committed on the environment by irresponsible dog owners but a biological inevitability which has never been catered for. Perhaps parks could be regarded as the logical place for processing or recycling the nutrient deposits of dogs? Such policies might explore the possibility that even high density housing can be designed with the needs of companion animals in mind.

Most importantly policies based on the Urban Sextipede would acknowledge that animals are integral to community life as active and long standing participants. They would recognise that even seemingly unrelated decisions, such as those by the departments of housing or social services, can have a tremendously negative impact on the successful integration of animals into cities. They might even extend to the active encouragement of pet keeping in groups such as the aged which are currently disadvantaged. Adopting the Urban Sextipede might force us to view companion animals not as pathologies of urban living, but as a measure of the health of our society.

A PLEA

Imagining a city without dogs or even cats is difficult. It's hard to know what it would sound like, what it would feel like. Disturbing, probably, and lonely. How well our species would actually manage without them is another matter. As it stands currently we are not planning our dwellings in such a way that they can continue to fit into our lives. The concern is that if we do not start actively considering their needs during our adaptation to high density living, we will gradually lose touch with our animal partners not through design, but through neglect.

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Jonica Newby is a veterinarian who joined the Petcare Information and Advisory Service three years ago, following a period in mixed practice. As a divisional committee member of the Australian Veterinary Association, she launched the Pet Pep education program in Victoria, and currently convenes the national Pet Pep Advisory Group. Her interest in Urban Animal Management issues has led to work with numerous research and local government groups, and she was a member of the organising committee for the 1995 UAM Conference. Dr Newby also appears regularly in the electronic and print media, and is a contributor to the Science Show on ABC Radio National. She was recently elected to the AVA Board of Directors.

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