

# MODERNITY, HUMANS AND ANIMALS - TENSIONS IN THE FIELD OF THE TECHNICAL-INDUSTRIAL IMAGINARY

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**Abstract** *This essay is guided by two themes that concern the complexity of the modern world and the distinction between the human and the non-human. Keeping these themes in mind I will look first at the notion of modernity and the way in which notions of crises and tensions have been deployed, before turning to one set of tensions - the relation between the human and the non-human worlds through an analysis of the developments in the technical-industrial imaginary. In modernity, the regimes that humans put in place in relation to nature, and especially the animal world are constituted, principally, from the perspective of the industrialising imagination and technical regimes of control. I want to explore this theme and its crisis potential from the vantage point of both longer and shorter histories of human interactions with the animal world which intersect the history of modernity. The longer history includes the animal imbedded as a 'natural' extension to the human world, whilst the shorter one includes the animal as 'non-natural', prosthetic, or coded extension through the industrialization of the sign and the invention, for example, of DNA and genetic technologies. This interpretative move is made in order to throw the anthropological image of technical mastery into relief, as a prelude to critiquing it.*

**Keywords** modernity, humans, animals, nature, science, ontology, Castoriadis, Habermas, Markus

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A Militia major is driving along when he sees a militiaman standing with a penguin.

'Take him to the zoo', he orders.

Some time later the same major is driving along when he sees the militiaman still with the penguin.

'What have you been doing?' he asks. 'I said take him to the zoo'.

'We've been to the zoo, Comrade major', says the militiaman, 'and the circus. And now we're going to the pictures'.<sup>1</sup>

1. Epigraph to  
Andrey Kurkov,  
*Death and the  
Penguin*, London,  
2003, Vintage.

## I NATURE, ANIMALS, HUMANS - THE TENSION OF THE HUMAN ANTHROPOS IN THE TECHNICAL-INDUSTRIAL IMAGINARY

In modernity humans constitute their relations with nature, including the animal world, from the perspective of an industrialising imagination and

technical regimes of control. I want to explore this technical-industrial imaginary and its crisis potential not only from the vantage point of scientific or instrumentalist rationality, in the manner of Horkheimer or Adorno or Foucault, but also from the perspective of humans' interactions with the animal world, which can be used paradigmatically to throw the image of technical mastery into relief. This latter perspective begins with a history longer than modernity that includes the animal imbedded as a 'natural' extension to the human world, and a shorter one that at first only incompletely incorporates non-human animals into a technical-industrial imaginary, yet later fully incorporates them as 'non-natural' beings that are constituted through a self-referencing system of signs. Yet the industrial-technical imaginary with its image of technical mastery does not exhaust the ways we may constitute our relations with non-human animals. In the last two sections of this essay I will discuss ways that this technical mastery is viewed as a problem that can be purportedly managed, before turning to some alternatives to both the technical and managerial relation of humans over non-human animals.<sup>2</sup>

2. A shorter and re-written essay based on this paper and entitled 'Beyond Control and Passion: Towards an Ontology of Responsibility' appears in *Responsibilities*, edited by Ghassan Hage, Melbourne, 2012, University of Melbourne University Press.

## II A HUMAN HISTORY THAT INCLUDES A NATURAL HISTORY OF ANIMALS

Everyday life, as well as technical specialisation and functional and status divisions in human societies, can be reconstructed for any civilisational history of humankind from the perspective of the domestication of animals and livestock. From this perspective, there was not only the grain revolution of the Neolithic period (from 10,000 BC onwards, but more conventionally from between 6-5000 years BC), but as importantly revolutions in the shaping of sheep and goats, cattle, pigs, horses, asses and mules through the techniques not only of pastoral containment and new forms of ownership, but also taming, and where possible - for dogs, sheep, cattle, horses - selective breeding. One could also speak of an equine revolution (and in other parts of the human world, bovine, camelidaen, or elephantidaen revolutions) in which power for transportation and labour came to be provided by the horse, the ox, camel or dromedary, or elephant. In this sense, this is a history of millennia, rather than decades or hundreds of years. Leaving to one side the paleo-history of human's relation with canines, the training of cattle (oxen), horses, camels and elephants for transportation, labour, ceremony, war and hunting occurred from approximately 7000 BC with full domestication of the horse and the invention of specialised riding equipment at approximately 4000 BC.<sup>3</sup>

3. Juliet Clutton-Brock, *A Natural History of Domesticated Animals*, Cambridge, Cambridge University Press, 1999; Tim Ingold, 'From Trust to Domination: an alternative history of human-animal relations' in *Animals and Human Society Changing Perspectives*, (eds), Aubrey Manning and James Serpell, London, Routledge, 1994, pp1-22; Juliet Clutton-Brock, 'The Unnatural world: behavioural aspects of humans in the process of domestication' in Manning and Serpell, pp23-35; Calvin W. Schwabe, 'Animals in the Ancient World', in Manning and Serpell, pp36-58; Chris Stringer and Robin McKie, *African Exodus The Origins of Modern Humanity*, London, Jonathon Cape, 1996.

This non-human animal and human relationship includes not only material life, but also, and as importantly, the diverse and rich cultural formations or social imaginaries that humans have produced and through which they understand themselves and project this understanding. It is through this cultural production that animals have been incorporated into the human world, as both material 'objects' for slaughter and for use, as

4. I am using the term social imaginary in the way Castoriadis deploys this term as a constitutive social ontology through which humans create their worlds. See, Castoriadis, *The Imaginary Institution of Society*, Cambridge, Polity Press, 1987. See also Clifford Geertz, *The Interpretation of Cultures*, Basic Books, New York, 1973, and David Lewis-Williams and David Pearce, *Inside the Neolithic Mind Consciousness, Cosmos and the Realm of the Gods*, London, Thames and Hudson, 2005; and *The Animals Reader The Essential Classic and Contemporary Writings*, edited by Linda Kalof and Amy Fitzgerald, Oxford, Berg, 2007.

5. It is suggested that there are four other competing modern social imaginaries apart from the technical industrial one. These are the modern social imaginaries of monetarisation, of nation state formation, aesthetic expressivism, and democratic and public sphere formation. I have discussed these imaginaries elsewhere. See for example, John Rundell, 'Temporal horizons of modernity and modalities of waiting', in Ghassan Hage, *Waiting*, Melbourne University Press, 2010, pp39-53.

6. Gyorgy Markus, 'Changing Images of

well as representation. Animal representations may have taken the form of aesthetic representations, of animals depicted in paintings or sculpture, for example. Alternatively the living animal may be imbued with a specific sacred and symbolic dimension through which it may be venerated, adored, abhorred, and even sacrificed. In other words, animals were never only simply eaten or put to work, they were always - even before the domesticating revolutions - entwined in the way in which human cultures have been formed and shaped.<sup>4</sup>

However, the lens or focus can be shortened in order to bring this animal/human history, which will be termed here, and in absence of a better term, an 'equine history' where the horse is viewed as the paradigmatic animal - closer to us and imbedded in *one* of the histories and social imaginaries of modernity. This imaginary is the technical-industrial one, in which science is not only its cognitive expression but also its cultural one. This social imaginary exists amongst the other histories and social imaginaries of modernity that run in parallel with it.<sup>5</sup> In the technical-industrial imaginary, the 'natural lives' of non-human animal species are located in, and viewed as, an explanatory aid for technical and scientific enquiry with its new objectivism and new modes of experimentation, for example in the new mechanics of the body, including the circulation of blood. As Gyorgy Markus has pointed out in his hermeneutically inspired analysis of the constituent aspects of modern scientific activity, science only exists as 'a highly organised (and constantly recognised) body of texts as *cultural objectifications* with a well defined range and modality of admissible meanings which is determined by the cultural norms regulating the ways they ought to be written ... (Science) ought to be supplemented and mediated by a historically oriented cultural pragmatics of science'.<sup>6</sup> Science already refers to a horizon of cultural conventions or prejudices (Gadamer), as well as fictions or imaginary significations (Castoriadis) that are modern. In other words, modern science shares characteristics with modern culture that include and emphasise processes of creativity, innovation, rupture, short, rather than long, traditions, and ceaseless activity.

In these contexts of rupture and ceaseless activity, Markus indicates two aspects that are internal to the specific type of creative and productive autonomy of modern science that begins paradigmatically with Bacon and Descartes. These two aspects are the objectivistic and the subjectivistic. According to Markus, the objectivistic dimension includes the way in which the modern value of autonomy is interpreted as the invention of the technical mastery of nature through the use of purposive rules (as against 'idle' curiosity), which occurs as a this-worldly activity, that is, as one that techno-industrially intervenes in everyday life. Moreover, the objectivistic dimension is systemic in a double sense. In one sense, the produced work of science became differentiated from other sources of modern life and activity, and a 'system' is created that itself produces specialisation and professionalisation.

In another sense, knowledge formation is also viewed as a system, that is 'by proceeding methodically one can always determine and justify which questions make, or do not make, sense at a given stage of enquiry'.<sup>7</sup> These aspects add up to what Markus describes as the formation of a single system of science or the mono-functionalisation of science.<sup>8</sup> Animals became re-defined and objectified through this mono-functionalisation, in that they became objects for experimentation, which occurred from the Renaissance onward and was consolidated with Harvey's experiments in blood circulation from the 1600s onwards in which the heart was 'discovered', after much dissection, as the natural engine of the body.<sup>9</sup>

However, even though the form of life of the scientific producer and the animal under study or experimentation became irrelevant, the idea of the subject did not disappear. As Markus points out, the subject to which science refers in this early modern context was not the scientific experimenter, but Nature, construed as 'the second book of God', or 'the great chain of Being', whose secrets could be unlocked by the correct method.<sup>10</sup> In other words, from this perspective animals became reinterpreted as a subject of nature to be included, incorporated, and lifted beyond their world of everyday toil or focus for curiosity into the objectivistic system of science. They become objects for the production of specialized knowledge.

By the time that Kant was writing at the end of the eighteenth century, the mono-functionalisation of science, in terms of its own objectivism and subjectivism, came to predominate, and it still does. As Markus further points out, Kant's task was to limit the activity and legitimacy of science to its own domain for the sake of the other forms of rationality, especially practical reason where the human being was viewed by him, at least, as an end-in-itself. In this context, a division of labour emerged within the Enlightenment between pure and practical reason, and between it and Romanticism. In the Romantic tradition, the human being and animals are interpreted in representational-symbolic terms, as aesthetic-imaginative ends-in-themselves, and can even be re-enchanted.<sup>11</sup> This division of labour has entailed that a purported tension has occurred within cultural modernity between mono-functionalism and compensation in terms of meaning. In the Romantic view, the non-human animal is not simply a pet, incorporated into everyday life on the basis of an ascribed value of friendship, but venerated as natural, living or even mythologised nature, against which the dirt, pollution and disruption of the urban, industrialised world can be contrasted.

However, mono-functionalisation is itself a form of meaning which takes its own value from the technical mastery of nature through the use of purposive rules, which it reflexively, creatively, critically and endlessly works on to produce new science, new techniques and new objects, some of which have used animals simply as tools and objects for experimentation as a pathway to their own production. In this sense, nothing has changed. But has it?

Science', in *Culture, Science, Society. The Constitution of Cultural Modernity*, Leiden, Brill, 2011, p199. See H-G Gadamer, *Truth and Method*, 2nd revised edition, translated and revised by Joel Weinsheimer and Donald G. Marshall, 1989; and Cornelius Castoriadis, *The Imaginary Institution of Society*.

7. Markus, *Ibid.*, p158.

8. Markus, *Ibid.*, p158-159. See also Markus, 'The Paradoxical Unity of Culture' in *Culture, Sciences, Society*, p69.

9. See William Harvey, *Movement of the heart and blood in animals. An anatomical essay*, translated from the Latin by K.J Franklin, Oxford, Blackwell, 1957; Tibor Doby, *Discoverers of Blood Circulation, from Aristotle to the times of da Vinci and Harvey*, Pref by John F. Fulton, London, Abelard-Schuman, 1963; Linda Williams, *The Image of the Animal: Figurations of human-animal relations in Western modernity*, Unpublished PhD Thesis, the University of Melbourne, 2006.

10. Markus, *op. cit.*, pp153-154.

11. See Markus' discussion of Kant's philosophical construction of change in 'Changing Images of Science', pp171-184. See

Charles Taylor's *A Secular Age* for a discussion of the Romantic impulse and the problem of the loss of enchantment. Although Charles Taylor, for example, does not examine the possibility of the re-enchantment of the animal in his *A Secular Age*, it is an implication of his study. Another path that becomes possible is the historicisation of nature in the wake of hermeneutical sensibilities. This path is, if not laid, then at least, partially re-made by Charles Darwin. For him there is a natural drama that was eventually historicised in his *Origins of the Species*.

12. Anna Sewell *Black Beauty*, New York, Aladdin Paperbacks, 2001, p237. The context for Sewell's novel is the nineteenth-century movement and subsequent legislation against animal cruelty. See Andreas-Holger Maehle, 'Cruelty and Kindness to the Brute Creation': Stability and Change in the Ethics of the Man-Animal Relationship, 1600-1850', and Harriet Ritvo, 'Animals in Nineteenth Century Britain: Complicated Attitudes and Competing Categories', both in Manning and Serpell, op. cit., pp 81-105, and pp105-126, respectively.

13. Sewell, op. cit., p329.

### III CARS, CLONES AND GENOMES - THE SHORTER HISTORY OF TECHNICAL- INDUSTRIAL MODERNITY

Let's begin with a couple of readings from Anna Sewell's *Black Beauty*; the first pertains to World War I, the second to horse-drawn vehicles.

...without master or friend, I was alone on that great slaughter ground; then fear took hold of me, and I trembled as I never trembled before; and I too as I had seen other horses do, tried to join the ranks and gallop with them; but I was beaten off by the swords of the soldiers ... Some of the horses had been so badly wounded that they could scarcely move from the loss of blood; other noble creatures were trying on three legs to drag themselves along, and others were struggling to rise on their forefeet, when their hind legs had been shattered by shot ...the greater part of the noble willing creatures that went out that morning never came back! In our stables there was only about one in four that returned.<sup>12</sup>

I got along fairly until we came to Ludgate Hill, but there the heavy load and my own exhaustion were too much. I was struggling to keep on, goaded by constant chucks of the rein and use of the whip, when in a single moment - I cannot tell how - my feet slipped from under me, and I fell heavily to the ground on my side; the suddenness and the force with which I fell seemed to beat all the breath out of my body. I lay perfectly still; indeed, I had no power to move, and I thought now I was going to die.<sup>13</sup>

The invention of internal combustion engines (both petrol and diesel) in a variety of experimental stages throughout the nineteenth century beginning in 1806 and culminating in Benz and Daimler productions in 1885/86 and 1886/89, produced an autonomously moving 'beast' that post-dates and supersedes the invention and institutionalisation of steam-driven technologies. This invention signalled, in effect, the short carbon-petroleum based history of humankind's interaction with the natural world, a history that is now having long-term negative consequences in terms of climate change. However, from the perspective of our equine protagonist, *Black Beauty*, this invention constituted a liberation of revolutionary proportions. In spite of other forms of cruelty, violence, blood and toil told upon countless millions of human beings on battlefields, and in factories, gulags and concentration camps, the everyday world of the horse, at least in industrialising and transporting environments, has been transformed for the better. They no longer toil nor go into battle, notwithstanding the continuity and the creation of other forms of horse-work such as policing, stock-work, riding for leisure and for sport.

In addition, though, another transformation can be viewed as a second technical-industrial revolution that involved, not the carbonisation of the

machine, which transformed the machine into an automaton and set the scene for a robotic or cyborg or cybernetic technical fantasy, but a revolution of the sign or the code. This revolution occurred with the ‘discovery’ of the structure of DNA during the 1950s and not without controversy, at least within the scientific community, as to who the first ‘discoverers’ actually were. It is here that a different interaction between the human and the animal occurs in which the boundaries are blurred in distinctly problematic ways that have been explored by Donna Haraway, for example, in her portrayal of Oncomouse.<sup>14</sup> In a more concrete but no less sophisticated way, this revolution of the code, has, nonetheless, also impacted upon our equine protagonist in terms of genetic industrialisation, especially through extra uterine breeding techniques and cloning to ensure the continued ‘bloodlines’ of highly prized and priced specialists in racing and equestrianism, for example. Selective breeding now occurs through artificial insemination, embryo transfer or transplant, cloning, in other words through genetic manipulation.<sup>15</sup>

In the context of the revolutions in carbon-petroleum invention and DNA coding, technical-industrial mastery runs unchecked across all spheres and boundaries. Limits are turned into obstacles that can be overcome; boundaries are turned into frontiers that can be reached and then crossed, including the boundary between the human and the non-human animal. It is here that the invention of the sign enters with a vengeance, not simply as signification *qua* the linguistic paradigm, but as replication. It is through this image that contemporary sign-based technologies and their sciences act as a form of re-enchantment or meaning creation that draw on an idealised self-image with its own culturally articulated horizon. The image of replication, first created as science fiction, which produced a cultural context and a hermeneutic prejudice, enables the limits of the empirically experimental and testable to be pushed. This experimentation, fabrication and manufacturing were portrayed first as a modern tragedy in Mary Shelley’s *Frankenstein*. In her critical depiction of modern hubris Shelley portrays the manufacture of a being out of already existing parts, a type of assemblage that required a shock of modern energy to spark it into life.<sup>16</sup>

To put it slightly differently, the image of fabricated replication is the fiction or imaginary point of reference that propelled the project of contemporary genetic industrialisation into life, at least in the biological and bio-medical fields. In other words, in the context of the world of contemporary science, which is both auto-poietic-systemic in the manner described by Markus above, and technically masterful, *replication* not only becomes the experimental norm, but also its own enclosed self-referential and ‘non-material’ fiction - its imaginary subject.

Nonetheless, unlike Shelley’s *Frankenstein*, replication through DNA technologies produces something new, rather than an assemblage or re-arrangement of pre-existing parts. This entails that the subject, whether human or animal, has not disappeared, but from the standpoint of the technical-

14. See James Watson, *The Double Helix*, London, Weidenfeld and Nicolson, 1981; Donna Haraway, *Modest-witness@second millennium. FemaleMan-meets-OncoMouse: feminism and technoscience*, New York, Routledge, 1997.

15. Juan C. Samper, *Equine breeding management and artificial insemination*, St Louis, Mo, Saunders Elsevier, 2009.

16. Mary Shelley, *Frankenstein or The Modern Prometheus*, New York, Random House, 1984.

industrial imaginary appears in contemporary guise as the gene, or the DNA sequence - code - that can be broken, fully utilized to create a new and different sign, rather than simply a re-combined object. The scientist is no longer in love or at war with Nature, but is a decoder and creator of enigmatic script or text. Unlike the scientific self-image of the early modern period, which constructed an image of an intercourse with Nature including the animal world (perceived as something raw, rude, unfeeling, and empirical which the scientist came to either civilize or cut into), nature and animals are, as such, no longer of interest to contemporary science. What is of interest are only processes of replication and cloning in order to create an entity that is not strictly speaking reproduced. These entities, whether they are drugs, disease resistant fruit and vegetables, or really existing non-human animal beings, become the forms for a world of self-creating and self-reproducing codes. There is no longer an 'other' external to the system with which one can interact on the basis of either love or domination. Animals, then, are no longer loved or dominated either, because they no longer exist. Rather, the system only relates to itself - as a piece of self-reproducing information.<sup>17</sup>

Herein lies the imaginary horizon for the creation of contemporary forms of technically created and orientated meaning. Sign as replication means that we have only Dolly (the sheep), or the cultural-imaginary Pris, Rachel or Roy invented, patented, to both live and die outside their own 'natural' histories.<sup>18</sup> Even the liberated horse in its world of a new pastoralism is subject to the technical mastery of its genetic code, and as such there is no such thing as a 'natural cycle' for the mare and the stallion. The gelding can only be cloned.

#### IV ANIMALS, HUMANS, MODERNITIES IN TENSION - BETWEEN MANAGEMENT, LAW AND ROMANTICISM

In the context of a differentiated modernity it can be argued that the various social imaginaries of juridification, democratisation, aestheticisation, and monetarisation, along with the industrial-technical one, compete with one another in their creation of meaning and power. This means that nature and animality are always concepts in the making, made from interpretations created from any of these imaginaries, which may or may not be disconnected from one another. Nature is not a passive external environment upon which abstracted interpretations called scientific theories are not mapped onto it in a taken-for-granted way.<sup>19</sup> In the context of the two longer and shorter histories of humans' interactions with animals there are two meanings in nature. The first meaning of 'nature', including animal life, is as a metaphysical 'for-itself', which is viewed here in value terms as 'the integrity of life', although a life that may remain essentially unknowable to us, and which cannot be fully captured under the ancient lineage of *physis*. It is in this context that the natural world and non-human animals

17. See Ian Wilmut and Keith Cambell with Colin Tudge, *The Second Creation: Dolly and the age of biological control*, New York, Farrar, Straus and Giroux, 2000; Jess Buxton and Jon Turney, *The rough guide to genes and cloning*, London, Penguin, 2007; Aaron D. Levine, *Cloning*, New York, Rosen, 2009; Arlene Judith Klotzko, *A Clone of Your Own?: the science and ethics of cloning*, Oxford, Oxford University Press, 2006.

18. Pris, Rachel and Roy Batty are some of the so-called 'android' characters constructed by Philip K. Dick in his 1968 salient novel *Do Androids dream of Electric Sheep?*, London, Orion Books, 1999. To be sure, the actual manufacture or replication processes are alluded to in the novel, and pre-date the actual invention of cloning technologies.

19. See Peter Winch, *The Idea of a Social Science and its Relation to Philosophy*, 2nd Edition, London, Routledge, 1990; Bryan R. Wilson (ed), *Rationality*, Oxford, Blackwell, 1991; Helen Verran, *Science and an African Logic*, Chicago, University of Chicago Press, 2001.

can be a source of enchantment and magical or mythical power *for us*, even though they stand apart from the human world. As indicated in Markus' analysis of the mono-functionalism of science, above, the second meaning is post-metaphysical in that it explicitly posits that it is we who construct, intersect, disturb, shape and transform Nature, and thus the non-human animal world. Notwithstanding that the second post-metaphysical version is more significant for our current reflections, especially its objectivistic version, however, in contrast to the 'dialect of Enlightenment' thesis, it is suggested that there are possibilities for critical reflection and contestatory interpretative action, because the post-metaphysical turn has set loose an array of interpretative possibilities, possibilities that are constitutive of modernity itself. In other words, modernity is constituted as a plurality of creative and interpretative possibilities.<sup>20</sup>

This configuration of the conflict of interpretations can be seen in modernity in the way in which the circulation of scientific knowledge may or may not be legitimated. Legitimation occurs through the circulation of knowledge within and outside the system of mono-functionalism, which includes the formation of scientific and ethical research committees. To be sure, these conflicts can be brought into alignment, managed, and partially suspended through these scientific and ethical research committees that often function as self-governing bodies. This managerialism is especially the case when the committees function as pseudo-public spheres in order to address so-called cutting-edge issues in areas such as biotechnology, DNA sequencing, and the production of new organisms.<sup>21</sup>

The formation of research and ethical committees raises, though, the problem of the relation between so-called lay and expert cultures, including the presuppositions and nature of democratic practices that flow from decisions concerning which groups are to be selected, and how they are to be represented. It remains an open question as to whether consultative bodies, as well as public meetings, the press, and even pedagogical spaces such as museums, function as aspects of the public sphere, or have only an administrative function. In other words, it remains an open question whether these public spheres function as spaces for critical debate unimpeded by criteria of access, or only as spaces for the circulation and legitimation of specialised knowledge.<sup>22</sup>

These particular public spheres of science and non-science implicitly or explicitly address images of nature, the human and the non-human. It is in this context that another interpretative strategy may be mobilised at the level of arguments about science that draw on and re-work the conventional images of nature, the human and the non-human animal, and the boundaries that are marked between each for the formation and practice of legitimate knowledge. To be sure, Kant's program of the formalised distinction of the worlds of pure and practical reason, and of aesthetic creation is still the paradigm, and Habermas remains his contemporary

20. See Plato, *Timeaus* in *Plato The Collected Dialogues*, edited by Edith Hamilton and Huntington Cairns, Princeton, Princeton University Press, 1989; In addition to Markus also see Richard Rorty's reconstruction of the modern objectivistic current in his *Philosophy and the Mirror of Nature*, Princeton, Princeton University Press, 1979.

21. See Barbara MacKinnon (ed), *Human Cloning: Science, ethics and public policy*, Urbana, University of Illinois Press, 2000; Rosamond Rhodes, Leslie P. Francis, and Anita Silvers, (eds), *The Blackwell Guide to Medical Ethics*, Malden, Mass. Blackwell, 2007; Justin Healey (ed), *Cloning and Stem cell Research*, Thirroul, N.S.W., Spinney Press, 2007.

22. K.S. Shrader-Frechette, *Ethics of Scientific Research*, Lanham, Md, Rowman and Littlefield, 1994; René von Schomberg, *Science, Politics, Morality: scientific uncertainty and decision making*; Dordrecht, Kluwer Academic Publishers, 1994.



23. Habermas, 'An Argument against Human Cloning', in *The Postnational Constellation*, Polity Press, pp163-172, 2001. See also Martha C. Nussbaum and Cass R. Sunstein, *Clones and clones: facts and fantasies about human cloning*, New York, Norton, 1998.

24. Markus, 'Changing Images of Science', op. cit. pp195-198. See also 'The Paradoxical Unity of Culture', op. cit., pp69-71.

25. See David R. Koepsell, *Who Owns You?: the corporate gold-rush to patent your genes*, Chichester, West Sussex, Wiley-Blackwell, 2009; Herbert Gottweis, *The global politics of human embryonic stem cell science: regenerative medicine in transition*, Basingstoke, Palgrave Macmillan, 2009.

26. See for example Michel de Montaigne, *The Complete Essays Michel de Montaigne*, translated and edited with an introduction and notes by M.A. Screech, London, Penguin, 2003; Tzvetan Todorov, *Imperfect Garden*, translated by Carol Cosman, Princeton N.J., Princeton University Press, 2002; Agnes Heller, *Time is Out of Joint Shakespeare as Philosopher of History*, Lanham, Rowman and Littlefield, 2002; Jean Kazez, *Animalkind: What*

representative. Habermas' formulation of the three spheres of rationality enables him to produce a limited, yet defensive, critique of science. The limits of this defensive critique are evident in his equally defensive critique of human cloning. For Habermas, cloning *per se* presumably belongs to the legitimate bounded world of scientific discourse.<sup>23</sup>

Markus also makes a similar point more critically in a way that challenges this three-world schema, and in a way that also opens onto the possibility of a position beyond the defensive one. Markus points to the conflict between knowledge viewed as the common good, and knowledge viewed as intellectual property, a conflict located in debates concerning public spheres and not scientific knowledge.<sup>24</sup> In the light of this distinction between the common good and intellectual property rights, the debate over the results of the genome project and non-human cloning - as paradigms of post-classical science - emerge not only along the grid-lines of the legitimacy or illegitimacy, proper or improper use of technical mastery within the system of mono-functionalism, but also the ownership of this particular form of technical mastery. In this latter context, this piece of objectivated knowledge is a subject defined only in terms of specified juridical rights, principally the right of ownership over this subject as a piece of intellectual property. In this case, too, this piece of newly created knowledge would be a knowledge-object defined in terms of, and subject to, the powers of the capitalist market or the neo-patronage of the nation-state. This knowledge object, whether an 'it' in the form of a new piece of medicalised 'code', a 'he' or 'she' in terms of a really existing cloned non-human animal, would be for all intents and purposes a modern slave, and not only an early modern curio, ready to take its, her, his place in the circus or museum after completing life in the laboratory. In this context juridification may provide a limit, for example, in the testing and accruing of possible rights for genetically altered and engineered beings.<sup>25</sup>

However, juridification does not end the story. Rather, what also emerges is the definition of who and what is produced. Is the being who is innovated a subject - an end-for-itself (irrespective of whether it is a sheep, a cow, or potentially a human being) - or only an objectivation of technical knowledge with a legal patent to legitimate it?

It is not law that is required, but the continuity of the (non-Cartesian) humanist sensibility towards the subject.<sup>26</sup> This understanding is expressed not only in terms of the recognition of human imperfections and foibles, but also in the recognition of affective relations with, and responses to, the non-human world. In some ways, even Habermas recognises this. In his reply to his interlocutors around his earlier work, Habermas concedes that a different anamnestic attitude of reminiscence or memory may be required, through which a compassionate relation to nature, including non-human animals can be established. This attitude may lie even beyond the horizon of moral-practical insights with their own assumptions of reciprocity and responsibility. As he states, 'with these living creatures who are indeed *affected* by the normatively

regulated, morally relevant behaviour of humans, who could not, even counterfactually, step out of the position of those affected and take up the role of *participants* in practical discourses - nature in itself would come into view in a certain way, and not only the nature instrumentalised by us'.<sup>27</sup>

Habermas goes on to argue that this anamnestic or reminiscent attitude, through which we could establish a solidaristic response to non-human animals when they are being used instrumentally and cruelly need not, though, result in a change of paradigm. Rather, 'a transition to a morality that includes the compassionate relation of humans to nature as a cosmically expanded solidarity with everything that is capable of suffering and that in this vulnerability calls for reverence', can be made within the orbit of his 'this sided' deontological discourse ethics.<sup>28</sup> For him, the normative validity claims of practical reasoning cannot be carried over into the relation between humans and nature, including non-human animals. In this context, the notion of care, which he equates only with Heidegger's work and to which his remarks are directed, is one that 'can lay claim to an ethical status *only* in relation to those who are released into autonomy and reciprocity'.<sup>29</sup> The Heideggerean notion of care results in a conceptual re-naturalisation of the relation between humankind and non-human animals and nature, and thus decreases the boundaries between both, which, for Habermas, has a double result. On the one hand, it becomes difficult to determine, so Habermas argues, where the anamnestic or reminiscent attitude should finish with regard to the complexity of the living environment. In other words, should all of living nature be included, including plants, or only non-human animals?<sup>30</sup> If so, then this anamnestic attitude is in danger of becoming a fully-fledged philosophy of Romantic mergence. Both the human and nature disappear or become indistinguishable. In other words, it is not the emotional affective response that is the problem here, but the blurring of boundaries, because the blurring of boundaries between humankind and nature, including non-human animals, in terms of a re-naturalisation can lead in exactly the opposite direction. On the other hand, then, genome mapping and genetic experimentation meshes humankind, non-human animal life and nature so completely together through cognitive-instrumentalised coding that the human and non-human become indistinguishable. Or to put it another way, distinctions are only marked in terms of specific genetic codes. They become the only markers of legitimate identity.<sup>31</sup> Other 'markers' of identity become irrelevant. Here, too law and instrumentalism merge.

However, is a deontological ethics that reaches to anamnesis or reminiscence when pushed towards a non-instrumental relation to nature enough to address the nature of both contemporary developments in the technical imaginary and the forms of interpretation and action that might be taken to address them, especially with reference to non-human animals?

In other words, Habermas, for one accepts that, because of the division of

*we owe to animals*,  
Chichester, West  
Sussex, Wiley-  
Blackwell, 2010.

27. Habermas, 'A Reply to my Critics,' in John B. Thompson and David Held (eds) *Habermas Critical Debates*, London, Macmillan, 1982, p247. See also Dieter Freundlieb, Wayne Hudson and John Rundell, 'Reasoning, Language and Intersubjectivity' in *Critical Theory After Habermas Encounters and Departures*, edited by Dieter Freunlieb, Wayne Hudson and John Rundell, Leiden, Brill, 2004, especially pp15-20, where this aspect of Habermas' work has also been discussed.

28. Habermas, *Ibid.*, p248.

29. Habermas, 'A reply to my critics, op. cit., p248.

30. *Ibid.*

31. This is an implication of Habermas' argument in his *The Future of Human Nature*, Cambridge, Polity Press, 2003.

32. Habermas tends towards accepting control qua instrumental rationality, even if there is a limit in that it may entail the recognition of the relation between humans and non-human animals, and thus a responsibility for the objectivating attitude. In this sense it is a responsibility in a three-fold way: first, that it is itself an interpretation; second, that it involves recognition of the effects of action; and third that it involves recognition of an 'other' qua other for whom one has even an implicit responsibility. However, as will be discussed below, this is a value position, and one that does not belong to the pragmatics of language. For example, Vogel's defence of Habermas' anthropocentrism is correct in as much as he wishes to defend a this-sided anthropology against the new Romantic pantheisms and theological-ontologies. Yet, the linguistic paradigm short-circuits a more comprehensive account that belongs to a theory of the creation of values that pre-figures linguistically structured or in-built normativity or instrumentality. There is a variety of valuing positions that are internal to different social imaginaries, for example, the expert, the mythologizing, and the cognitively intersubjective. See

separate fields and a division of labour between them, it has been assumed that practical reason could not be a basis for either a critique of science or a well-founded well-spring for counter-meaning. This has been left to modern aesthetics in the form of Romanticism, especially with its images of mergence - with one's lover, with Nature, with non-human animal life - or re-enchantment. But as indicated above, it not only blurs the boundaries, but also shifts the weight from moral responsibility to one of only an emotional response.<sup>32</sup>

## V TOWARDS AN ONTOLOGY OF UNKNOWNNESS

The issue of the status of the experimented animal and the newly cloned subject alerts us to another possibility framed by a different anthropological image that re-states the ontological primacy of the subject, and in a way that does not rely on memory or reminiscence to maintain or retrieve it. Rather, this anthropological image posits specificity as well as relations with others. Specificity and relationality, or what has conventionally been termed inter-subjectivity, is approached from both sides, that is the side of the subject, and the side of the relational forms that subjects constitute and are themselves co-constituted through. In order to throw some light on this anthropological image I want to conclude the final part of the discussion with a thesis that 'we are largely unknown to one another'.

The 'we' includes the human and the non-human animal worlds, and this unknownness occurs at the levels of corporeality, inner and imaginary life. Here the archetype is the living being. Any living being has its own corporeal end whether or not this manifests itself as the specificity of a particular living species. This corporeal end, this self-finality is accompanied by or co-constituted with a world of one's own. As Castoriadis puts it, 'this proper world is constituted each time in and through a series of encasements and inter-lacings of various kinds; the proper world of a dog 'participates' in the proper world of the species of dogs, the proper world of the cell of this dog is simply a condition for the proper world of the dog without explicitly participating in it'.<sup>33</sup> The cell takes place in a play of determinations and interactions that make up this world, and it is neither identifiable nor reducible to it. The world of the dog is a world of dogness, just as the world of the falcon is a world of falconness, or, in the spirit of Black Beauty, the world of the horse is a world of horseness. These are separate worlds - co-existent with other worlds including the human one, yet distinct. The worlds may interact, but each remains largely unknown to the other, even though they may be contextualized by the same larger organic and inorganic worlds that are the necessary backdrops. We, as humans, cannot enter the worlds of dogs, falcons or horses, even though they enter ours on our terms, for training, whether for work, or for companionship. They have their own relationality, their own world and dynamics, which cannot be simply summed

up in terms of our imagined and mono-functional reconstruction of them through behavioural, ethological, or evolutionary sciences.

Thus, from this perspective, all living beings are subjects. Nonetheless, there is a distinction between the human and the non-human animal in terms of what Castoriadis has indicated as an explosion of imaginary flux during the long period of hominisation, the result of which is the replacement of organ pleasure with representational pleasure.<sup>34</sup> This means that the human animal is the animal that is de-functionalised, 'mad' in Castoriadis' terms, that is, the animal for which nothing can be taken for granted, even in terms of its organic nature. Humans create horizons of meaning for their own activities. As such, these activities are imbedded in webs of both psychically and socially created and constituted meaning that spread to include not only human 'nature' but also nature as a whole, including the non-human animal world.

If human beings invent or create everything, they also create everyday and practical reasoning and not only the technical one. Practical reasoning invokes a notion of responsibility, which is not imbedded in the pragmatics of language as part of a quasi-transcendental norm, or only as an intersubjectively structured moment. Rather, in contrast to Habermas' position outlined above, it is a gift, not in the sense portrayed in Mauss' seminal work, but as one that can be given without obligation or an expectation that it will be returned. It refers to the self-recognition and self-imposition of limits, where self-limitation becomes an act of responsibility, including to the non-human animal world, in other words to other sentient beings. And to be sure, it is humans who have this capacity - this is a one-way street and a one-way gift (but all human actions are partially so, from the most brutal to the most magnanimous). Like Mauss' view of the gift, reciprocity may be an expectation that can be developed as a norm, but distinct from Mauss', it is not one that exists at the level of the expectation of the return.<sup>35</sup>

Here, we can follow, too, the footsteps of the work of Martin Seel rather than that of Castoriadis. In his interpretation of Adorno's work, Seel emphasises a notion of autonomy (or Adorno's positive notion of freedom) as 'letting the other be without interference', in other words, of letting the other remain unknown.<sup>36</sup> It is also, perhaps, a re-statement of Kant's notion of beauty as a type of freedom *qua* 'purposiveness without purpose'. Perhaps, too, this is what Heller means when she refers to a contemporary ethics as the 'consciousness of reflected generality', in which our 'here and now' is no longer identified only with humankind in its here and now, but also with what she terms planetarian consciousness, in which responsibility by us in the recognition of our foibles is at its core. In her *A Theory of History* she recounts a story told by Castoriadis in which his Greek peasant great-grandfather plants olive trees for his great-grandchildren. This was no self-denial or deferred gratification, but a pleasure. For her, planetarian

Steven Vogel, *Against Nature The Concept of nature in Critical Theory*, New York, SUNY Press.

33. Cornelius Castoriadis, 'The State of the Subject Today', in *The World in Fragments Writings on Politics, Society, Psychoanalysis and the Imagination*, edited and translated by David Ames Curtis, Stanford, Stanford University Press, 1997, p145.

34. Without making some distinction between the human and the non-human, a defence of the natural world, the specificity of non-human animals, and a critique of cruelties and of the technical-industrial imaginary becomes problematic and difficult to sustain without falling into the traps of Romantic mergence, instrumentalism and utilitarianism. The distinction that is preferred here is one that is based on the notion of the radical imaginary rather than the use of either tools or language. See also, Dominick Lacapra, 'Re-opening the Question of the Human and the Animal', in *History and its Limits Human, Animal, Violence*, Ithaca, Cornell University Press, 2009, pp149-189, and Andrew Benjamin, *Of Jews and Animals*, Edinburgh, Edinburgh Press, 2010 for alternative ways of addressing this issue.

35. Marcel Mauss,

*The Gift the form and reason for exchange in archaic societies*, translated by W.D. Halls, forward by Mary Douglas, London, Routledge, 1990; Jacques Derrida, *Given Time. I, Counterfeit Money*, translated by Peggy Kamuf, Chicago, Chicago University Press, 1992. See my discussion of Mauss' idea of the gift in 'Tension of Citizenship in an Age of Diversity: Reflections on Territoriality, Cosmopolitanism and Symmetrical Reciprocity, in Rainer Bauböck and John Rundell, (eds) *Blurred Boundaries Migration, Ethnicity, Citizenship*, Aldershot, Ashgate, 1998, pp321-340.

36. Martin Seel, 'Adorno's Contemplative Ethics', in John Rundell, Danielle Petherbridge et al, (eds) *Contemporary Perspectives in Critical and Social Philosophy*, Leiden, Brill, 2004, pp259-270.

37. Agnes Heller, *A Theory of History*, London, Routledge and Kegan Paul, 1982, p 35; 'The Beauty of Friendship', *The South Atlantic Quarterly*, 97,1, (Winter 1998): 5-22.

responsibility resembles planting olive trees. In another sense, it also is having a disposition of *friendship* towards the non-human animal world.<sup>37</sup> And one could say that it resembles this pleasure and friendship in a double sense. It is part of a sensuous-imaginary life where responsibility is lived as vocation that is orientated towards the future, and hence towards others, not as the fast, technically instituted time of progress, but as slow time - the time for different kinds of imaginings, reflection, contemplation, relationships, and non-relationships with both human and non-human animal subjects.