

Tora Holmberg

Unfamiliar biological futurities: Animals in techno-science

One other thing also remains for certain, which is that whether increased biological control comes to be fulfilled as a promise or as a false hope in the context of transbiology is a question we will reckon better if we know our cyborg history. (Franklin, "The Cyborg Embryo" 179)

Sarah Franklin's comprehensive work in feminist science and technology studies is probably well known to most of *Humanimalia's* readers, but most certainly not to all. Although much of her research involves the bio-technological use of other animals and the far-reaching cultural consequences and contexts of this kind of animal experimentation, Franklin's way of approaching human-animal relations is perhaps unfamiliar to most readers. Thus the aim of this brief introduction is to contextualize the scopes and arguments of Franklin's paper, "Future Mix: Remodelling Biological Futures" (in this volume), into more familiar human-animal studies terms, themes, and ongoing debates. The article itself is an account and an analysis of an art/science/communication school project, initiated and performed by, among others, Franklin herself. Within the project, pupils in a London school were supposed critically to engage with imaginable bio-technological futures concerning, for example, cloned and transgenic animals. The project resulted in an art exhibition in which some students chose to embody — to mimic — Dolly the cloned sheep and to think about the future(s) through her bovine mind and words.

Human-animal divide. Agamben, in his book *The Open* (2004), discusses what he calls the "anthropological machine," meaning the scientific, philosophical, and cultural construction of the "human" as set apart from, yet always in relation to, other animals. "Homo is a constitutively 'anthropomorphous' animal [...] who must recognize himself in a non-man in order to be human" (27). Being human is a constantly rehearsed recognition based on separation, in which animals are said to lack human qualities (be it language, capacities to experience existential issues, memories or ideas of future and death). Thus the "human" is constructed as a positive category and the "animal" a negative one. This separation not only degrades animals (as many philosophers and ethicists have pointed out), but as a consequence threatens to put humans at risk of animalization. While Agamben does not critically engage with the "animal-side" of the bond, his ideas can easily be transferred to thinking about concrete cases of human-

animal relations and concrete animals (the tick is the only animal present in his book, used only to discuss Heidegger's point that animals are "poor in world"; see also Oliver). "Human exceptionalism" also has great consequences for the environmental crises and climate change that we are facing today. In Franklin's work, bio-technology's production of clones and transgenic organisms can be understood as a process that reproduces, and at the same time ultimately challenges, the great modern divide between humans and animals.

Dolly represents the increasing ability to introduce new forms of transfer into the processes of reproduction and heredity, as well as the possibility of translating these into new applications that promise to improve agriculture and human health. In particular, she represents the possibility, or threat, of a kind of technology transfer — from sheep, *Ovis aries*, to humans, *Homo sapiens sapiens*. She thus stands for the desire to distinguish the animal from the human, and to prevent their mixture, while also, paradoxically, embodying their ever more proximate union — and the fallacy of such a dividing line between them. (*Dolly Mixtures* 30)

Others have pointed at the subversive potentiality of this ambiguity, and of the possibilities of transgressing the human/animal divide. Challenging human-animal divides may possibly change what Heidegger calls "the open" in the long run, and thus change our oppressive practices towards other animals. One needs of course to ask oneself, "what's in it for the animals" (cf. Birke "Naming names")? The question is also, can we legitimate the use of other animals in animal experimentation? Animal experimentation is a highly ethically ambiguous practice (cf. Birke, Arluke & Michael). On the one hand, we use other animals to improve the health of our own species. On the other hand, through this research, it becomes clear how similar other animals are to us. Thus the anthropological machine produces some powerful dilemmas and paradoxes that science, its publics, and, not least, people who work in laboratories must confront (ibid). It has been argued that such dilemmas produce a kind of institutional shame that sometimes makes scientists hide what they are doing, they keep the experiments secret (cf. Holmberg & Ideland, "Secrets and lies" [2010]).

Transgenic animals are products of what Sarah Franklin terms *transbiology* — describing the contemporary organization or rather re-organization of living matter, of what Foucault named "life itself" (cf. Franklin, "Cyborg Embryo"). Transbiology not only

describes the bio-medical practice of today, but also captures the postmodern diffusion of science into all imaginable spheres of society: from popular culture to politics and economics. Franklin builds on Haraway, and suggests that in the same way as the cyborg was helpful to understand then contemporary couplings of biology, technology and informatics (cf. Haraway, *Modest Witness* [1991]), transbiology can be used as a figurative trope, a tool to understand our contemporary norm in biology — as “not only born and bred, or born and made, but made and born” (Franklin, “Cyborg Embryo” 171). “Like the cyborg embryo, transbiology is a mix of control and rogue, or trickster, elements” (ibid). Transbiological offspring, such as Dolly or the more mundane transgenic mouse, help to highlight the transgressive intervention underway, in which traditional views of sexuality, genealogy, body, reproduction, kinship, and species become challenged. But one must also ask, what are the consequences of this technological and cultural episteme for the mice, or rats, or sheep? And, as critics such as Lynda Birke would argue, transgenic animals can be viewed as a manifestation of masculine ideals of transcendence and limitlessness (Birke, *Feminism and the Biological Body* 164). Transgenesis is not inherently good; it needs ethical considerations and critical political evaluation (cf. Twine).

Transgenic animals – dilemmas and debates. Clones and transgenic animals can thus be viewed as ambiguous and problematic creatures that crawl over human and animal as well as many other modern boundaries: between nature and culture, science and technology, organism and innovation, to name just a few (cf. Haraway, *Modest Witness*). These animals carry a magnitude of meanings, something that Franklin addresses in her paper; they signify scientific progress and embody hope for revolutionary breakthroughs that will lead to cures for human suffering (see also Holmberg & Ideland, “Selective Openness”). Mike Michael points out that these expectations can be viewed as performative. For example, in the negotiations that go on in animal research ethics committees, any purpose linked to possible scientific breakthroughs is sufficient to justify animal experiments (see Ideland). Transgenic animals also stand in for *dystopic* science future narratives, representing Frankenscience (as Franklin notes in her essay in this volume). However, they are also living laboratory animals, and as such, subjects of their own life worlds. Ralph Acampora has conceptualized the life world of an experimental animal as a carceral one, meaning that the animal’s “environment is dominated by the overarching fact of bars, or walls, or fencing — hence the rodents come to phenomenally assimilate the carceral into the carnal” in a kind of “jailhouse body” (*Corporal Compassion* 99). The transgenic animals are also subjects for animal welfare concerns. Problems specific to transgenic animals described in the literature include the “surplus animals” that are used in production and breeding, the physical

and emotional burden put on the animals used for production (especially on the female donors and surrogates), and the prevalence and risk of unexpected phenotypes (cf. Schuppli, Fraser & McDonald). Other difficulties specific to transgenic animals are assessments of the phenotypic and welfare status of genetically modified (GM) animals, rapidly being codified into fixed knowledge with the establishments of central databases with associated data to phenotypes deemed specific to transgenic animals (cf. Nuffield Research Council).

Haraway argues in *When Species Meet* that humans and other animals are “messmates,” meaning that we as companion species are always part of ongoing relationships, and that these are messy, complex, reciprocal, and asymmetrical, and analogously, Franklin speaks of “mixmates” in her paper. Haraway has argued that perhaps it is not possible to imagine that we could do without animal experimentation, but that we need to find responsible practices. In the laboratory context, she uses the term “sharing suffering” to describe such experimental ethics. Sharing suffering means being responsible and *response-able*, in a reciprocal manner, to the needs of laboratory animals (*Species* 77).

However, it has been argued that Haraway’s concepts overprivilege the idea of mutual relationships, ignoring the vast power imbalance between researcher and experimental animals, and thus does not explicitly bring to the fore the fact that the animals do not choose to give their suffering bodies and lives to science, but rather such work is forced upon them (see Adams, “The animal manifesto” [2006]). In Acampora’s words, it could be argued that the lab animal experiences the world in a way that removes her ability to be fully herself with laboratory humans — who is equally prohibited from *being with* the animal. Moreover, transgenic animal research is also corporate research, involved in capitalist logics and politics (Emel & Wolch 154; see also Twine). Karen Rader speaks of experimental animals as “scientific capital.” This is also highlighted in Franklin’s own *Dolly mixtures*, in which the complex connections between agriculture, business and science are unfolded (see also Franklin, “Sheepwatching”).

Challenging silences? There seems to be an endlessly rehearsed theme when it comes to transgenic and genetically modified animals: in research and in public discourse, they are portrayed as sources of future salvation from human illnesses; they embody hope and expectations of future scientific breakthroughs. Because of its frequency, this theme can be characterized as transgenic *noise*. However, there are also striking *silences*

when it comes to ethical and welfare concerns (Holmberg & Ideland, “Transgenic Silences”).

The project *Future mix* is situated in a certain kind of public setting, that of a London school. Helena Pedersen argues in *Animals in Schools: Processes and strategies in human-animal education* that animals are at once visible and invisible in school curricula. On the one hand, the role of animals in human societies is often discussed — in animal experimentation, hunting, zoos, and so on. The norms regarding human use of other animals are nevertheless seldom challenged. On the other hand, animals are often invisible, as in for example the taken-for-granted use of milk and meat in school canteens. This invisible teaching of animals’ place in human society, of the speciesist ideology, is what Pedersen calls the “zoocurriculum.” Franklin’s project, which in her own words lies between bio-art and science communication, can be seen as an attempt to break with this silence. The students in the paper do engage with animal welfare, and perhaps in ways that were not intended by the initiators of the project. Franklin, in her conclusion, reflects upon the ways in which the students’ interpretations of and artful engagements with Dolly seem to “see the future from her eyes,” thereby in a sense combining a “speaking from,” “speaking among,” and “speaking with,” which is something other than “speaking for” someone. Eva Hayward writes that animals are always “troubling the language that attempts to name them. In this way, non-human animals seem to put an oral void into language. Animals cannot be named without invoking the limits of the process of naming” (260). Answering this dilemma, Hayward has developed the concept of “speaking nearby” animals as an ethical and methodological tool meant to help avoid the pitfall of speaking for the other, without being left only with the option of silence. Perhaps *Future mix* could be interpreted as a means of speaking nearby, thus creating some noise about animals in techno-science.

Works Cited

Acampora, Ralph. *Corporal compassion. Animal ethics and philosophy of body*. Pittsburgh: U Pittsburgh P, 2006.

Adams, Carol J. “An animal manifesto. Gender, identity, and vegan-feminism in the twenty-first century.” *Parallax* 12:1 (2006): 120-128.

Agamben, Giorgio. *The open*. Stanford: Stanford UP, 2004.

Birke, Lynda. *Feminism and the biological body*. Edinburgh: Edinburgh UP, 1999.

———. “Naming names – or, what’s in it for the animals?” *Humanimalia*, 1:1 (2009). 26 February 2011. <http://www.depauw.edu/humanimalia/issue01/birke.html>

Birke, Lynda, A. Arluke, M. Michael. *The Sacrifice: How scientific experiments transform animals and people*. West Lafayette: Purdue UP, 2007.

Emel, Jody, and Jennifer Wolch. “Witnessing the animal moment.” *Animal Geographies: Place, Politics, and Identity in the Nature-Culture Borderlands*. Ed. Wolch, J. Emel, J. London: Verso, 1998.

Franklin, S. “The cyborg embryo: our path to transbiology.” *Theory, Culture and Society* 23:7-8 (2006): 167-188.

———. *Dolly mixtures. The remaking of genealogy*. Durham, NC: Duke UP, 2007.

———. “Sheepwatching.” *Anthropology Today* 17:3 (2001): 3-9.

Haraway, Donna J. *Modest_Witness@Second_Millennium.FemaleMan _Meets_OncoMouse*. New York: Routledge, 1997.

———. *Simians, cyborgs and women. The reinvention of nature*. New York: Routledge, 1991.

———. *When Species Meet*. Minneapolis: U Minnesota P, 2008.

Hayward, Eva. “Lessons from a starfish.” *Queering the Nonhuman*. Ed. Noreen Giffney and Myra J. Hird. Farnham: Ashgate. 2008.

Holmberg, Tora, and Malin Ideland. “Secrets and lies. ‘Selective openness’ in the apparatus animal experimentation.” *Public Understanding of Science*, published online first 24 August. 2010.

———. “Transgenic silences. The rhetoric of comparisons and transgenic mice as ‘ordinary treasures.’” *Biosocieties* 4:2 (2009): 165-181.

Ideland, Malin. “Different views on ethics. How animal ethics is situated in a committee culture.” *Journal of Medical Ethics* 35:4 (2009): 258-261.

Michael, Mike. "Futures of the present: From performativity to prehension." *Contested Futures: A Sociology of Prospective Techno-Science*. Ed. N. Brown, B. Rappert, and A. Webster. Aldershot: Ashgate, 2000.

Nuffield Council of Bioethics. *The ethics of research involving animals*. London: Nuffield Council of Bioethics, 2005.

Oliver, Kelly. *Animal lessons. How they teach us to be human*. New York: Columbia UP, 2009.

Pedersen, Helena. *Animals in schools. Processes and strategies in human-animal education*. West Lafayette: Purdue UP, 2009.

Rader, Karen Ann. *Making mice. Standardizing animals for American biomedical research, 1900-1955*. Princeton: Princeton UP, 2004.

Schuppli, C., D. Fraser, and M. McDonald. "Expanding the Three Rs to Meet New Challenges in Humane Animal Experimentation." *ATLA* 32 (2004): 525-532.

Twine, Richard. *Animals as biotechnology. Ethics, sustainability and critical animal studies*. London: Earthscan, 2010.