Chapter

Challenging bio-obejctification: adding noise to transgenic silences

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Mapping the problem

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. Transgenic animals, and thus the discourses surrounding them, embody hope and expectations of future, scientific breakthroughs. Because of its frequency, we would like to characterise this theme as transgenic *noise*. However, there are also striking *silences* when it comes to ethical and welfare concerns. We will address the noises and silences through the analytical lens of *bio-objectification*, and discuss how this particular bio-object – the transgenic mouse – can be viewed as both the product of bio-objectification, and as a potential challenger of the same process.

To give some background, transgenic animals are animals that have been genetically altered on purpose; genes have been either knocked-out, added or reinforced, in order to study the effects in a living (or dead) organism. Although the majority of animals being used are mice, many other species, including sheep, rats, fish and pigs, have recently been modified. In Sweden, which is the national context of this chapter, about a third of all mice used in research are transgenic in one way or the other (Swedish Board of Agriculture 2008). Transgenic animals are produced and bred all over the world, both commercially and at special transgene units on university campuses, and are thus subjected to what can

be labelled "technoscientific bespoking" (Michael 2001). By making animals "ready-to-order", the risk of instrumentalization is pressing. Through standardization, homogeneity is an important dimension of the bio-objectification process.

The structural conditions that frame the handling of transgenic mice include the legal context, the international, national and local policy regulation and the ethical review process. First of all, the Animal Welfare Act states that experimental animals should not be subjected to "unnecessary suffering" (Djurskyddslagen 1988: 534). Since 2007, Swedish experiments on animals are controlled by the Board of Agriculture. Local animal ethics committees scrutinize projects dealing with animal experiments through a mandatory reviewing process. Concerning transgenic animals, you have to state in the application if it concerns "genetically modified animals", and consequently declare if this means that you expect any certain welfare effects.[1] Examples of problems specific to transgenic animals described in the literature concern 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 (Schuppli, Fraser and McDonald 2004). Other difficulties specific to transgenic animals are assessments of the phenotypic and welfare status of genetically modified (GM) animals and establishments of central databases with associated data to phenotypes are also mentioned as specific for transgenic animals (Nuffield Research Council 2005).[2]

[1] When the application has gone through the review process – which it usually does since 99 percent of all applications get approved (but often with certain conditions (Nordgren and Röcklinsberg 2005) – it works as a tool for researchers, animal technicians and veterinarians to decide on treatments and procedures.

[2] The formal ethical apparatus apart, each and everyone who works within the business (researchers at different levels, students, laboratory assistants, animal technicians, but also lay people in the animal ethics committees) have to take individual stands in order to handle daily situations and dilemmas: When is an animal too unhealthy, where is the endpoint? When and how is the mouse to be euthanized? What is a good enough aim of the project, justifying the experiments that I do? What is morally correct, and where do I draw the line? These questions have no given answers. They cannot easily be solved

Furthermore, transgenic animals constitute forms of techno-scientific hybrids, and, as such, simultaneously challenge and confirm cultural categories and dichotomies (Brown et al 2006). They can be understood as "boundary crawlers", as critters constantly balancing on the fine line between nature and culture, animal and human, organism and innovation, reality and model, science and technology. In other terms, these bio-objects have the potential of shifting a number of boundaries. Or, as Haraway so aptly puts it: "transgenic creatures, which carry genes from 'unrelated' organisms, simultaneously fit into well established taxonomic and evolutionary discourses and also blast widely understood senses of natural limit" (Haraway 1997: 56). They can be viewed as heterogeneous, culturally contested objects, and therefore highly interesting for any cultural science studies endeavour. However, one can always ask what is in it for the animals? What if the mice in our study could speak? What would they add to the discourse? In this paper, we will try to speak *nearby* mice (Hayward 2010), as an ethical standpoint, meaning that we will try to bring them into the text by way of asking the questions above throughout the chapter.

With this background in mind, we address the politics of bio-objects – the contingent positioning – by highlighting how dilemmas with transgenic animals become constructed as a non-issue by the people who handle them in practice; laboratory workers and members of animal ethics committees. We will do so in the empirical part, by recapturing some of the lessons that have been learned from our project, showing how narrations of the transgenic animals as any other animal and – at the same time – exclusive and different, create a space for both transgenic silences and noise. A tension between the normal and the different is built up and adds to the discourse on transgenic mice as ordinary, but at the same time quite extraordinary – as *ordinary treasures* (Holmberg and Ideland 2009).In the

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by a cost-benfit analysis, through referring to the Three R's or through ethical guidelines. Ethical dilemmas are constantly present and their character change depending on context, and in relation to the animal in question (Haraway 2008: 71).

last section, we take the analysis a step further to explore how the bio-objectification process can be interrupted and challenged, and invite the "trans" of transgenics to do some analytical work, as we consider these silences in the light of conversations with theoretical encounters with "trans" in the writings of feminist science studies scholars.

Some notes on method

As already mentioned, the ambiguous character of transgenic animals, captured so well in Haraway's quote above rarely becomes articulated, neither in laboratories and ethics committees, nor in interviews with people who represent these arenas. Perhaps the most striking result of the project is that people who work with and/or ethically review research with transgenic mice, seldom articulate that there are any specific ethical issues for this branch. Transgenic animals has thus not become an "issue", in contrast to for example genetically modified crops, cloned animals or genetic tests. This silence can be viewed as a discursive effect of institutionally produced exclusion procedures (Foucault 1972), rendering some matters "unspeakable" (Billig 1999, Kulick 2005). The question is how these discursive silences take shape and what rhetorical devices and strategies contribute to transgenic silences. In order to answer these questions, we proceed from the discursive perspective that focuses on how people make use of different interpretative repertoires or culturally available sets of statements. Wetherell and Potter (1987, 1993) argue that people make use of specific interpretative repertoires and construct versions of reality in relation to the social context. Speech is viewed as a social act, rhetorically organised to bring to the fore a contextually fitting version of reality (Potter 2001). Included in the social situation are, besides participating (human and non-human) actors, also for example assumptions about what the "correct" opinion might be, and overall cultural norms and values. Brown and Michael (2001), for example, show how scientists and medical practitioners routinely switch between different repertoires in their legitimizing of porcine organ donors for

humans. Depending on the comparison point – human or non-human primates – different cultural-ethical or natural-scientific repertoires are used, all with the effect of proving that from a scientific point of view pigs are similar enough to humans to be used as organ donors, but morally speaking different enough to be used as a living organ bank.

The project this paper builds on consists of two case studies, and the empirical data has been collected through ethnography, including observations and interviews (see Marcus 1995). The first specific case henceforth referred to as Laboratory Workers (LW), conducted by sociologist Tora Holmberg, explores the research practice and considers how researchers, laboratory assistants and animal technicians handle dilemmas in talk and practice.[3] In the second study, ethnologist Malin Ideland investigates how members of animal ethics committees talk about transgenic dilemmas, both in committee meetings and in individual interviews (in quotes called Ethics Committees Members: ECM).[4] The empirical data from the research project, as a whole, consists of 40 semi-structured interviews and a large number of observation protocols from ethnographic field studies. Both interviews and observations have focused on how researchers and members of the committees handle dilemmas with animal experiments in general and transgenic animals in particular. From this data we have constructed categories of rhetorical strategies, commonly used in the empirical material.

[3] Data is diversified and consists of observations from a two-week course for researchers (Holmberg 2008), field work with several research groups, including observations of animal experiments in practice, and field work at two different animal houses – departments where the lab animals are bred and kept. Moreover, in total 20 semi-structured interviews with researchers at different levels, laboratory assistants and animal technicians from two different Swedish universities have been conducted (Holmberg 2010).

[4] Ideland interviews 20 members of animal ethics committees during 2006 and 2007. Among these 20 members, three persons represent animal welfare or animal rights organizations, six are representatives of political parties, ten are scientific experts from different disciplines and one is an animal technician; all in all, six different local animal ethics committees are represented. The interviews were semi-structured. Twelve meetings, both in preparatory and plenary meetings, in six different committees have been observed (Ideland 2009).

Trangenic silences – ordinary mice and normal transgenes

It was mentioned in the introduction that transgenic mice can be mail-ordered from commercial as well as university based breeders. Phenotypic consequences can be rather tricky to predict when the animal model has been locally produced, and different tests to characterise early behavioural and other deviations have been consequently been developed (Nuffield Council of Bioethics 2005). Most of the interviewees agree that there seldom occur any dramatic and unexpected effects, which in itself can become a problem: "You have the dilemma I have seen that the mice I have are so immensely normal, I look carefully for the smallest deviance and I don't find a thing." (Interview researcher, LW)

What is good for the animal – in this case lack of unexpected effects – is not always good for the experiment, which puts the researcher in a dilemmatic situation. On the one hand you aim at certain effects, and on the other you might have to break off the experiment if they occur. Uncertainty concerning phenotypic consequences is a problem some of the interviewed ethics committee members are reflecting upon, mainly answering a direct question. But most often they emphasize the transgenic *normality:* "they act and look like any other mice" (Interview animal technichian, ECM). Comparisons with "ordinary mice" here mean that the transgenic animal becomes normalized – it is nothing but yet another mutated mouse: "If you have two cages, one with wild types or ordinary animals, and one with transgenic white mice – you can not tell the difference. [...] They eat normally, they live normally, and they breed normally." (Interview researcher, ECM)

These mice pass as ordinary and their normality become established primarily by means of technologies of vision and welfare assessments work mainly on this level. Comparisons with "ordinary mice" also mean that transgenic animals are somewhat naturalized. It can seem paradoxical to describe transgenic mice – a symbol of high-technological innovations – as essentially natural. Interviewees portray the modification of the genome as one end of

a continuum and as such, as nothing new. "Nature" has always been "doing" similar changes through spontaneous mutations, and nowadays it is done in the laboratories, in an accelerated process: "The difference from spontaneous mutations is that now we are speeding up the process. That's really the only difference." (Interview researcher, LW) The prevalence of spontaneous mutations is often brought up as arguments in the defence of genetic modification. The transgene technique is legitimized since natural processes can entail similar results as conscious technological interferences into biology. Discussions about naturalness plays down and normalize gene technology (see Butler 1990). It is also obvious that referring to nature "hides" human agency, it just happens. Moreover, it hides animal agency too, along with the labour these critters do. The "bio-part" of the bio-object is here emphasized in terms of uncontrollable nature. Somewhat paradoxically, this use of nature and naturalness is at the same time objectifying the mice, since it legitimizes the genetic modifications.

A related rhetorical instrument is history, narrated in the study as claims that humans "always" have been affecting these kinds of changes, not least through breeding:

> We humans have during thousands of years domesticated animals and changed their behaviour through selective breeding. An artificial selection rather than a natural. So I am not outraged by the manipulation, the meaning of genetic modification in laboratories. Many times the effect isn't more than through breeding. It is a little faster. […] This extra thing we do in the lab, I don't consider it ethically difficult. That we play God and invade the animals. (Interview researcher, ECM)

Reference to breeding is a common rhetorical technique legitimizing genetic modifications, when it comes to both animals and to plants. Once again this strategy contributes to placing the technology in a historical context. By selectively using history of science it is possible to avoid the fear and insecurity that often follow new technologies (Marwin 1988). But history can also be used in the opposite way; to create fear of new

techniques. Gene technology has for example been connected to eugenics and Nazi experiments. History can be used to either criticize or legitimize a technique. In this case, the history of transgenic animals is mostly used to point to the normality and naturalness of these mice.

An apparently opposing rhetorical strategy is to alienate a new technology from one that is already established. The normalization-process of the transgenic animals – the construction of them as ordinary – also means that transgenic mice are described as more ordinary than other – more or less debated – phenomena. Several researchers oppose the ongoing discussion of transgenic animals' possible welfare problems, through comparisons with other activities:

> If you change the genetic make up so that… the phenotype of the animal is not feeling well, or doesn't survive in the long run or so, then of course it is unpleasant for that animal. It has to be. But that does not only concern experimental animals, you have the debate about Belgian blue, for example, these large meat cattle which are not really genetically modified but bred that way. (Interview researcher, LW)

In defending the use of animals in research, it is customary to talk about how it actually is worse in other sectors, not least in the meat industry (Birke, Arluke and Michael 2007). In several interviews the cattle Belgian Blue is used as a deterrent example of problematic phenotypes caused by "common" breeding. It is possible to understand this contrasting as a discursive strategy to handle inherent dilemmas with the use of animals in research; like the researcher quoted above who does *not want* the mouse to be affected by unpleasant effects, but still *wants* to be able to study these effects as a result of his research. It also illuminates two parallell processes of bio-objectification. Through the process of homogenetity the mice become standardized instruments for research, and at the same time, the heterogeneous process constructs them as living organisms. As such they introduce mess in the otherwise "tidy" experimental practice and discourse (Holmberg

2010). They are synchronously messy life and tidy material and individuals working with this life/material are more or less forced to handle this ambivalence in discursive as well as other practices.

It seems clear that comparisons with ordinary, inbred laboratory mice, contribute to the construction of "normal", non-deviating transgenics, in which for example problems of unexpected phenotypes are minimized. By way of naturalizing the transgene production, any welfare consequences are ultimately placed on the individual animal, not as a result of the transgenic technologies. Comparisons with other animals and businesses, showed how the shift of repertoires enables the portraying of the "good life" of transgenic mice and minimising the risks of genetically modified laboratory animals. In comparisons with other lab mice, as well as with other animals and fields of GM applications, suffering again appears as a problem with the mouse, not as caused by technologies. Human as well as animal agency moves out of sight, by way of the repertoires used. This hiding of agency is part of the "blackboxing-process", in which the process that lies behind scientific results becomes invisible (Latour 1999). The social factor should not be decisive for valid scientific data; matters of fact are regarded as "mirror of nature" (Shapin and Schaffer 1989, see also Kruse 2006). In the same way successful – or unsuccessful – transgenic animal models are not represented as results of human agency. Instead, they are constructed as results of scientific progress, and in the black-boxing process human involvement, and thus responsibility, vanishes.

Transgenic noise – animals as treasures

As stated above, in comparisons with other animals and crops it is the normality of transgenic mice that is emphasized. However, when the interviewees instead compare the animals with humans, in particular patients, another perspective appears. The transgenes then become transformed, through a shift in repertoires, from ordinary, common and safe,

to cherished treasures. Thus a discursive shift takes place, but the meaning remains; there are no specific dilemmas with transgenic mice – they are like other laboratory mice – except the hope that they can "perhaps" open doors for future breakthroughs. They are ordinary, but still treasures.

> I: If we can create a drug which uses this gene product, then we can help all people with this disease, it could be Parkinson's disease or Alzheimer's disease, so this kind of knowledge is extremely critical. […] So, because of this it is so… precisely this with genetics and animal models are so awfully important. And it was rewarded with the Nobel prize.' (Interview researcher, LW)

The future is central in the talk about transgenics. Just like the history, the future is a major element in the legitimizing process, as it has been in many other, similar debates about new biotechnologies (Borup et al 2006, Brown and Webster 2004). Hope for medical solutions become embodied in the experimental animals, but also in comparisons with humans – through the talk about future patients. The researcher quoted above, emphasizes future possibilities by referring to earlier research. Another researcher brings forward the potential possibility of the "risky" basic research.

> Medical progress has often not happened when you have looked for it intentionally. It has been a side-effect of a more general knowledge-searching. […] you don't know the outcome. Perhaps nothing. Perhaps cure for all diabetics for their entire lives. Millions of people can be benefitted from it. (Interview researcher, ECM)

In this uncertainty scenario, the utility aspect that is supposed to be included in the cost-benefit-analysis becomes extremely plastic. This plasticity results in the near impossibility of questioning the purpose of the experiment, since it may perhaps be useful in the future. "Perhaps" is a key sign, a reoccurring word in the discourse concerning transgenic animals, not least in comparisons with humans. The animals will "perhaps" develop a problematic phenotype. They can "perhaps" lead to a cure for millions of patients. The uncertainty is both good and bad, but it is the good prospects that most often win, not least because there

are patients who embody the expectations. Mike Michael (2000) points out that these expectations can be viewed as *performative*. Through different discursive forms such as metaphors, narratives and other signs of promises of scientific progress and better (healthier) lives, they conjure up the future in the present (Brown et al 2006: 2). In discourses on transgenic animals, hope for medical breakthroughs are being built in. "We can not close those doors", is an effective argument to overshadow fears of the unexpected and the potential suffering for the animals. The unexpected is instead to be expected (Borup et al 2006: 295), it is what can open doors hitherto closed, to further understanding and, in the extension, methods for treatments. In the negotiations that go on in the ethics committees, any purpose concerning possible scientific breakthroughs are good enough to justify animal experiments (Ideland 2009). What about the transgenic mice? Would they agree that this uncertainty scenario is a good enough reason to invest their lives and efforts – that is, their transgenic labour? Their voices become silent in the transgenic noise surrounding (possible) scientific success and progress.

Comparisons with humans, in particular patients, contribute to an economy of hope and scientific breakthroughs – where science as salvation curtails the suffering of animals – thus minimising potential and actual ethical dilemmas. In the public discourse, biotechnologies are almost synonymous with the language and imagery of futuristic breakthroughs. In this discourse medical rationality is always a good enough reason to use animals, as well as for example embryos, for health purposes (Brown 2003). The hope for biotechnological salvation leads to an instrumentalization of animals. The animals lose their own value, and become dispensers for hopes for medical solutions, for "the good life" (Michael 2000, Brown et al 2006). Now, instrumentalization, says Haraway, is intrinsic to embodied laboratory work, and it probably can not be in any other way (Haraway 2008: 71). Ambiguity is, as stated in the introduction, inherent to the use and understanding of

these mice, and refers back to transgenic animals understood as boundary crawlers, here balancing on the line between subject and object, individual and model.

Troubling trans

Taken together, what we have done so far is to investigate how competing discourses – in comparison to other phenomena – have been shaped and reshaped in conversations about transgenic animals. The message – that the transgenes are at once ordinary entities and radical exclusivities – is the same throughout, but different rhetorical comparisons are made that legitimise the transgenic enterprise. With the help of comparisons with ordinary laboratory mice, other animals and GM fields of applications, natural processes and humans, the increased use of genetically modified animals appear as all together unproblematic. It is rather constructed as an obvious continuation of both natural and historical processes, leading toward better treatments for future ill people, making the production and handling of experimental animals appear as totally agreeable. By way of promoting the potential medical benefits for humans, interviewees' statements add to a discourse on biotechnological salvation (Haraway 1997, Brown et al 2006). The flexible use of – and frequent shifts between – interpretative repertoires, highlight cultural norms concerning ecology, human health and animal suffering in an interesting mix. It also highlights how this particular bio-object is a) actively constructed, and b) contextually contingent. We argue that one of the problems with bio-objectification processes in general is precisely the highlighting of certain dimensions, and silencing of other aspects.

A more important point, however, is that these flexible characteristics are not innocent, the shifts between different repertoires contribute to the construction of "transgenic silences". For example, there are suffering and thus welfare issues connected to the transgenic technology, like expected and unexpected phenotypes, and surplus animals.

'Trans' can thus be viewed as a special kind of suffering. But this specialness is hidden under rhetoric of commonness, which contributes to how actors within the apparatus manage cultural and ethical dilemmas. For a democratic, responsible public science debate, which can intervene and raise new concerns, something completely different from silence is needed. In the present case, we will re-instate "trans" as a troubling tool, with the aim of counteracting transgenic silences. In order to do so, we will dwell on the concept of trans. Can "trans" as a pre-fix provide some hope against GM hype?

As a standard definition, "trans" derives from Latin and connotes to "across or over; beyond or above; from one place to another; to cross over, pass through, overcome" (Pryse 2000: 105). It transcends certain limits, and is thereby "suggesting the unclassifiable" (Hayward 2008: 253). Haraway writes that "trans" is both the process and the product of the crossing over of nature/culture borders (1997). Trans "cross a culturally salient line between nature and artifice, and they greatly increase the density of all kinds of other traffic on the bridge between what counts as nature and culture" (1997: 56). Haraway's conception of the transgenic and other mice as next of kin (Haraway 1997) enables us to bring some transgenic trouble out of the closet. As already mentioned several times, transgenic animals are boundary crossing in many ways, and cannot easily be categorised. They are therefore related to other queer and culturally disturbing figures like for example the "female man" and "feral children". Haraway states that a transgenic mouse is many things, and inhabits numerous cultural spaces and meanings. For example, it is a model for a disease, a living animal, a commodity, a machine, an organism, a tool, a patented animal and an invention. In that sense, the transgenic rodent shares the multitudes of meanings with the ordinary inbred mouse (see for example Birke 2003). They are both messy. But the mouse is also, as noted from one of our case studies, involved in laboratory interaction and as such an actor, not only responding to the experimentalist's actions, but also –

although in a very limited way – actually shaping his or her behaviours and feelings (Holmberg 2008). The trans-thing that Haraway develops in her study, threatens to lead away from what actually happens in interaction, to a more cultural level. And what happens to cultural norms when the frequent use of transgenic animals change their status from the exception that they where in the early 90s, to being part of the norm, as they are today?

"Trans" in Sarah Franklin's version is inscribed in the term *transbiology* – describing the contemporary organisation or rather reorganisation of living matter, of what Foucault named "life itself" (Franklin 2007). Transbiology is not just an epithet for laboratory action, but also captures the postmodern diffusion of science into all imaginable spheres of society; popular culture, politics, economics etcetera. Franklin builds on the trans-concept of Haraway, and suggests that in the same way as the cyborg was helpful to understand the contemporary couplings of biology, technology and informatics, transbiology can be used as a figurative troop, a tool to understand today's norm in biology – as something "not only born and bred, or born and made, but made and born" (Franklin 2006: 171). Transbiological offspring – such as Dolly the cloned sheep, or indeed transgenic mice – were at first miraculous because they where so normal. What made Dolly a successful clone, paradoxical as it may seem, is that she was both common and unique. In a similar vein, one could argue that there is something special with the transgenic mice – but that it is hidden under a rhetoric of commonness and 'business as usual', which contributes to the management of inherent dilemmas. But if we take a step further and consider the content of the comparisons made, a clear point appears: Are the transgenic mice 'really' so different? Are they not just, as our interviewees state over and over again, the contemporary endpoint of a beaten track of domestication of other species? The consistent and rehearsed argument has been that transgenic animals are understood as both ordinary, domesticated laboratory

mice, and as all together exclusive, the ultimate sign of biotechnological progress. Transgenic mice thus inhabit a flexible meaning, a doubleness that fits nicely with a discourse of biological control. As Franklin writes:

> In this view, the genetically engineered animal is both a symptom of human overconfidence in biological control and the culmination of a lengthy process by which the drastic consequences of domestication has been unfolding. (Franklin, 2007: 31)

Judith Halberstam has used Franklin's transbiology concept in a fruitful way, investigating knowledge production taking place outside of the laboratory; in wild life films and animal animations, as in horror movies (Halberstam 2008). She states that the concept helps highlighting the transgressive intervention going on, in which traditional views of sexuality, genealogy, body and reproduction become challenged. In a similar way of reasoning as Franklin and Halberstam, and indeed Haraway before them, one could argue that the transgenic mice do challenge many given norms concerning all of the above, but also in regards to kinship and species boundaries. Nevertheless, in our view, trans in feminist science studies tends to be understood as something inherently positive. But what is so good about it for the mice, or rats, or sheep? And, as some critics – like Lynda Birke – would argue, trans can as easily be interpreted as a nightmarish manifestation of masculine ideals of transcendence and limitlessness (Birke 1999: 164). Trans is not something essentially good – and Haraway is clear on this point – trans also needs ethical considerations.

Braidotti writes in her book *Transpositions* (2008) – a concept borrowed from Evelyn Fox Keller's reading of Nobel prize winner Barbara McClintock – about 'trans' as admitting 'alternative ways of knowing' (Braidotti 2008: 6), that is, both epistemological and ethical issues are at stake. Braidotti advocates a post-humanist, nomadic perspective in which transpositions stands for a sustainable ethics (2008: 33). To be nomadic, that is in

transition, is also to be somewhere, it doesn't place the actor outside of history. Transpositions, in Braidotti's words, is about becoming rather than of being.

Thus, we read Braidotti here as saying that one should not worry too much about technology altering nature but focus on the relationship as constitutive of species and individuals. Now, what would a Braidotti perspective bring to the problem of transgenic silences? Sustainable ethics, in our reading, is partly about asking new questions about transgenic animals; not only about whether they are normal or natural, how one should asses deviant behaviour or if they can escape from the lab and pollute wild rodents (these questions are of course also important), but also about what kinds of technologies (both technical, rhetorical and institutional) that enables these animals, how they affect the understandings of what it means to be human and mouse, and of the practices involved in producing these understandings. What we would like to see more of are the mice; their suffering, their agency, their labour. Haraway concludes that the Oncomouse – a transgenic mouse carrying e.g. breast cancer genes – is an incarnation of the Christian Messiah (Haraway 1997). She bears our suffering so that we (perhaps!) can be healthy. Within the sacrifice logic that is foundational in animal experimentation (Lynch 1988, Birke, Arluke and Michael 2007), the transgenic mouse carries the suffering of future patients. But, does this suffering need to be silent? Can she not scream and shout? Do the experiments need to be hidden and performed in secrecy (Holmberg and Ideland forthcoming)? We would argue that the labour and the suffering that is put into the transgenesis by the mice, should be part of the noise rather than the silence.

To conclude, our contribution to the conceptual framework, is to show 1) how bio-objects become discursively constructed with the help of rhetorical strategies, by which some aspects are highlighted while others are silenced, 2) how processes of homogeneity and heterogeneity work simultaneously, and 3) how the bio-objectification process,

through a third dimension of transgeneity, can be challenged by the very objects it produces. In other words, we add to the understanding of the bio-objects and their ability to change the process from within. Transgeneity in our case, means the process through which the ambiguous identity of the bio-object work to produce agency and new subject positions. Moreover, we would like to see a little more of trans in the public and scientific debates, since it might counteract transgenic silences. Bringing the 'trans-thing' back in, is thus a way of highlighting, rather than hiding, dilemmas with transgenic animals. It may also be a way of bringing the mice into the discourse. As Eva Hayward notes, 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." (Hayward 2008: 260) Thus, trying to speak nearby transgenic animals means reinstating 'trans', not as an attempt to specify a new category – trans is still about the unclassifiable – but to invite mice to crawl into discourse and create some noise.

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