

A short introduction to patenting of animals and a discussion on the ethicality of such

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Main points:

- Until the 1980s, it was widely agreed that living things are not patentable. The United States was the first country to take a look at the matter of patenting living organisms;
- the fact that patenting creates an encouragement for use and for profiting from species is what makes the legal protection problematic to ethics;
- animal patenting creates moral but also economic costs.

Introduction

Patenting living organisms is an accepted practice. Overall, if invented or specifically extracted with human effort, the organism could be considered an invention, which by definition ought to be protected by the laws of intellectual property.

Especially in Europe, the ethicality of laws is deeply considered. Yet, the divagations typically concern the ethicality as in concern to humans, not animals. Hence, the questions that ought to be examined, in the light of more than ever discussed animal rights, are whether the said legal ethicality extends towards animals, and how intellectual property rights treat non-human sentient beings, here through patents. Only then the costs and benefits of the practice can be fully weighted.

USA

Until the 1980s, it was widely agreed that ‘living things’ are not patentable. The United States was the first country to take a look at the matter of patenting living organisms. In the U.S., early patents were granted for bacterial and viral vaccines. However, when Ananda Mohan Chakrabarty developed a bacterium capable of breaking down crude oil, her employer, General Electric, filed a patent application which was subsequently rejected. At the time, living things were not patentable under Section 101 of Title 35 U.S.C¹. Eventually, after the case was reviewed and ruled in favour of the Commissioner of Patents and Trademarks, Diamond, the United States Court of Customs and Patent Appeals overturned the case in the scientist’s favour; and so did the US Supreme Court in *Diamond v. Chakrabarty*². A new precedent was

¹ Kevles DJ. 1994. "Ananda Chakrabarty wins a patent: biotechnology, law, and society". *Hist Stud Phys Biol Sci.* 25 (1): 111–135.

² *Diamond v. Chakrabarty*, 447 U.S. 303 (1980).

created which stated that being alive is not of relevance for patent law. The decision held that: ‘A live, human-made micro-organism is patentable subject matter under 35 U.S.C. §101. Respondent's micro-organism constitutes a "manufacture" or "composition of matter" within that statute’³. **It is remarkable that in the decision, the justices stated that it was now possible to patent ‘anything under the sun that is made by man’⁴.**

As with any groundbreaking case, it is important to understand the implications of *Diamond v. Chakrabarty* in a larger context. The result provided companies in the nascent biotechnology industry with the needed security and incentives to develop in the direction of organism inventions that are useful to the medical or agricultural sectors⁵.

This legal novelty was further extended in 1987 in *Ex parte Allen*, which led to the official acknowledgement of the United States Patent and Trademark Office that ‘non-naturally occurring, non-human multicellular living organisms, including animals, [are] to be [a] patentable subject matter within the scope of the Statute’⁶.

Generally, for an invention to be considered patentable in the US, it must fulfil 3 criteria under section 101 of the US patent law and be a novel and useful method, machine, manufacture, or composition. Patentability is excluded for human beings, as precluded under section 33 of the America Invents Act. The US Patent and Trademark Office further clarified that a living being is considered to be a product of nature and, hence, as such, is excluded from patentability, as it does not belong to any inventor. Only if there are significant differences between a living being that exists in nature and a living being invented or developed in some way such an invention could be considered to be patented⁷. This is applicable also for ‘novel’ animals.

Already in 1988, The Patent and Trademark Office granted the researchers from Harvard University a patent on a genetically-engineered mouse. This was the first patent on a living of a ‘higher form’⁸. Somewhat understandably, this sparked more controversy than the patenting of a bacteria.

³ *Diamond v. Chakrabarty*, 447 U.S. 303 (1980) 308-318.

⁴ *Diamond v. Chakrabarty*, 447 U.S. 303 (1980).

⁵ Robinson D and Medlock N. 2005. “*Diamond v. Chakrabarty*: A Retrospective on 25 Years of Biotech Patents”. *Intellectual Property & Technology Law Journal*, 17(10) 14.

⁶ USPTO, April 21, 1987 in Özdemir A. 2009. “Patenting Biotechnological Inventions in Europe and the US”. *Ankara Bar Review*. 42.

⁷ Dresser R J D. 1988. “Ethical and Legal Issues in Patenting New Animal Life”. *American Bar Association*, 28, 4, 399.

⁸ Dresser R J D. 1988. “Ethical and Legal Issues in Patenting New Animal Life”. *American Bar Association*, 28, 4, 399.

Europe

To be patentable, any invention in Europe, generally, must fulfil four criteria:

- a) there must be an "invention", belonging to any field of technology;
- b) the invention must be "susceptible of industrial application";
- c) the invention must be "new"; and
- d) the invention must involve an "inventive step"⁹.

The Convention including the rules was enacted in 1973¹⁰. Biotechnology, which deals with modified organisms, was then a newer developing field and how exactly its developments were ought to be dealt with by the law of intellectual property was not entirely comprehended. To provide modern clarification, in July 1998, EU Directive 98/44/EC on the legal protection of biotechnological inventions, known as the 'Biotech Patent Directive', was adopted¹¹.

It is relevant to make a distinction between discoveries and inventions. The former is not to be considered the latter if they do not include an element of technical action, for example, a technical process of isolation, as ruled on the European continent (hence, setting a useful example for most systems on the Old Continent) in the German BpatG (German: *Bundespatentgericht*) case *Antamanid*¹².

What distinguishes European patent law from the US one is the criterion of *ordre public* or morality. What these terms mean is not clarified by the European Patent Convention (EPC) of 1973; it only introduces them. Hence, due to the uncertainty, the terms are open to interpretation and are difficult to translate, especially into other legal systems. Briefly, however, *ordre public* may mean 'the proper order of the whole society'¹³. EU Directive 98/44/EC and its 1:1 implementation of the rules 23b-e of the EPC specify what the exceptions on the grounds of *ordre public* or morality may mean. For example, on the grounds of morality excluded are

⁹ The European Patent Convention of 5 October 1973, Art 52(1).

¹⁰ The Convention has been ratified by 38/46 European countries.

¹¹ The law included, relevantly, is only applicable for the EU Member States. The other parties to the Convention may solely rely on the subsequent amendments to the original document.

¹² BpatG, Beschluss vom 28.07.1977 – 16 W (pat) 64/75 "Naturstoffe."

¹³ Grubb P, W. 2004. "Patents for Chemicals, Pharmaceutical and Biotechnology", Oxford Un. Press, 281.

cloning of humans, modification of the human germline, using human embryos for industrial and/or commercial purposes, or genetic modification of animals that causes harm with no sufficient justification.

Paramountly for this overview, however, the EPC directly excludes all living inventions of higher form such as ‘plant or animal varieties’ from patentability, by distinguishing them from microbiological organisms¹⁴.

Ethics and law

As biotechnology has progressed from the genetic manipulation of microorganisms to the manipulation of genes in larger animals, some groups of interest have raised objections against the branch of science on the grounds of morality. According to Chakrabarty’s counsel, Dale Hoscheit, this has less to do with patent law itself and more with legal ethics¹⁵. This statement is by no means incorrect, but makes one wonder whether there should be a firm line drawn between these two legal areas. Overall, it is not uncommon to bind rules to ethics; arguably, the law in its entirety relates more or less to ethical assumptions. These two disciplines are not co-extensive, yet laws enforce a desired, expected behaviour, with ethics suggesting what ought to be that desired behaviour¹⁶. **Hence, even though the law might allow for something, ethics might question it; and by definition, while defying certain standards of ethics, it stands against what ought to be valued or awaited by society. Certainly, some laws contradict ethics, for example, the legalisation of death penalty stands against the basic dogma that killing is immoral and wrong. Nevertheless, the fact that death penalty lost its popularity in many states of the world illustrates that ethics may have more to do with law than most like to believe.**

¹⁴ Guidelines for Examination, Part C, Chapter IV, Section 2.3; http://www.european-patent-office.org/legal/gui_lines/index.htm;

As a side note: One could also attempt to question the morality of patenting bacterias or viruses, yet the argument may be quickly debunked if one objectively compares the living functions of those types of beings to a cat or a fish. Moreover, manipulation of microbiological organisms often aids in combating various global problems, such as pandemics; hence, utilitarians, or most for that matter, may consider the action appropriate.

¹⁵ Robinson D and Medlock N. 2005. “Diamond v. Chakrabarty: A Retrospective on 25 Years of Biotech Patents”. *Intellectual Property & Technology Law Journal*, 17(10) 14.

¹⁶ “Ethics and Law”. Lumen. <https://courses.lumenlearning.com/atd-epcc-introethics-1/chapter/ethics-and-law/> accessed 21 August 2021; “4. Ethics and the Law”. A Train Education. <https://www.etrainceu.com/content/4-ethics-and-law> accessed 21 August 2021.

Animal rights are very much so analogous to human rights. Even though the former is not as widely recognised, one might find many similarities between the UN Universal Declaration of Human Rights and the various documents enacted and the general philosophy of animal rights¹⁷.

The problematic incentive

The paramount gain of patenting is that inventors are able to retain control over the technologies they have invented. This allows to build stronger portfolios,¹⁸ but also to prevent any unwanted use that could be of detriment to the society at large. There are firm economic incentives derived from receiving a patent. **And exactly the fact that patenting creates that encouragement for use and profiting from species is what makes the legal protection problematic to ethics.**

Legal personhood

A very interesting development was the 2019 decision of the High Court of Punjab and Haryana of India,¹⁹ in which all animals in the animal kingdom were to be recognised as legal entities. The owners of animals in the state of Haryana were declared persons *in loco parentis* (in place of a parent), which made them guardians of now legal persons. **This is an important decision, another milestone in a trend or movement towards adopting an ecocentric, rather than anthropocentric, viewpoint on the protection and award of rights to animals.**²⁰ What is interesting about this case, if it may be added as a side note, is that the court confirmed something that may be very relevant in a debate in another legal area - of technology law. The argument about the necessity and ethicality of awarding artificial intelligence and other novel

¹⁷ For example: “The Canadian Animal Charter of Rights and Freedoms”. Animal Justice. <https://animaljustice.ca/charter> accessed 5 September 2021; or A Universal Declaration of Animal Rights, adopted from the International League of Animal Rights & Affiliated National Leagues in the course of an International Meeting on Animal Rights in London, September 1977; “Animal rights”. BBC Ethics Guide. https://www.bbc.co.uk/ethics/animals/rights/rights_1.shtml accessed 5 September 2021. Notably, the UN Universal Declaration on Animal Welfare is rather centred around human benefit than animal interests.

¹⁸ Özdemir A. 2009. “Patenting Biotechnological Inventions in Europe and the US”. Ankara Bar Review. 42.

¹⁹ Karnail Singh and others, *Petitioners v. State of Haryana*, Respondent CRR-533-2013 High Court of Punjab & Haryana At Chandigarh 2019.

²⁰ Shad S. 2019. “Indian High Court Recognizes Nonhuman Animals As Legal Entities”. Nonhuman Rights. <https://www.nonhumanrights.org/blog/punjab-haryana-animal-rights/> accessed 21 August 2021.

technologies with legal personhood²¹ is hereby supported, confirming the appropriateness of taking some non-human objects as legal subjects in themselves, as it is already done for companies or natural sights²².

The reason why legal personhood is relevant in the discussion on the ethicality of patenting certain species is because of what legal personhood is and what it guarantees. It imposes obligations and grants rights. **The term ‘legal person’ refers to a human or non-human entity that can be considered an active subject of law.** Active, which means that that person can be treated for the purposes of law and, hence, must obey the law. Most commonly, a legal person can sue and be sued, answer for their transgressions, own property, or enter into contracts. These are mostly examples of positive rights, the ones that one can exercise themselves or expect they will be subjected to by other members of the group. Against those stand negative rights, which award one with the freedom not to be treated in a certain manner. Both sets of rights are granted to legal persons. Arguably, and controversially, also animals would receive those upon obtaining personhood, obviously within the limits of what each animal as a species is capable of. If non-human animal species are legal persons, they, in principle, also receive the rights not to suffer, be treated respectfully, or not to be profited from. Here, one sees why the current patent legislation might appear problematic.

Speciesism

The aforementioned Indian decision is a step further from the older idea of granting legal personhood only to some species. Those who conform to the approach against such progression are frequently called speciesists, which is ‘the practice of treating members of one species as morally more important than members of other species; also, the belief that this practice is justified’²³. Importantly, it is not speciesist not to grant animals all the rights that people enjoy.

What is relevant is the essence of the liberties — the freedom of movement which entails the permission to drive a car would not be as beneficial to a monkey as it is to a human. Yet, this by no means indicates that it is morally justified to deprive animals of all rights.

²¹ More on this topic in the published bachelor dissertation of Lena Anna Kuklińska. The work can be found here: <https://ine.org.pl/en/establishing-liability-for-the-actions-of-artificial-intelligence-recommendation-for-the-european-commission/>.

²² Such as Muteshekau Shipu, a river in Quebec, which was declared a legal person in February 2021.

²³ “Speciesism”. Britannica. <https://www.britannica.com/topic/speciesism> accessed 6 September 2021.

Interestingly, it has been suggested that a non-speciesist approach to the rights of animals should be based on an approach of ‘progressive realisation’, inspired by the International Covenant on Economic Social and Cultural Rights (ICESCR). What this means is that people can and should recognize the positive rights of animals as full legal rights, even if they are aspirational, and not immediately achievable, as it is with some human and fundamental rights for particular people²⁴.

Speciesism is often condemned to the same extent as racism or sexism and when scrutinised, it is comparably wrong on the moral level²⁵. Many philosophers consider treating humans as superior to all the other beings, in the context of moral choice, as a prejudice. It can be called various names 'speciesism', 'human chauvinism', 'human racism', and 'anthropocentrism' — each of these terms having a slightly different meaning, however²⁶. **Speciesism has been deemed wrong because it creates a paradox — on one hand, people do not consider it to be right to unnecessarily harm animals, ‘yet they routinely and deliberately behave in ways that cause great unnecessary suffering to animals’²⁷.** To make it even simpler, some called speciesism simply unjustifiable²⁸. And for those science-orientated, or some philosophers, that is just enough to call it wrongful.

Notably, India is not the only country that progressed in the area of animal rights. There were similar developments in other states; yet, the focus had been usually put on ape or monkey species. New Zealand included restrictions on research on ‘non-human hominids’ in the Animal Welfare Act (1999).²⁹ In 2007, the parliament of the Balearic Islands, an autonomous province of Spain, enacted the first legislation in the world which granted legal personhood to all apes. These are examples of progress, yet still speciesist ones - taking that only apes were deemed worthy of legal protection. Germany, on the other hand, in an amendment to the

²⁴ Shooster J. 2017. “Legal Personhood and the Positive Rights of Wild Animals”. Wild-Animal Suffering Research. https://was-research.org/writing-by-others/legal-personhood-positive-rights-wild-animals/#Why_Does_Personhood_Matter_for_Animals accessed 21 August 2021.

²⁵ Cushing S. 2003. “Against “Humanism”: Speciesism, Personhood, and Preference”. *Journal of Social Philosophy*, 34, 556.

²⁶ More information: Fjellstrom, R. 2002. “Specifying Speciesism”. *Environmental Values*, 111, 63-74.

²⁷ Jaquet F. 2021. “A debunking argument against speciesism”. *Synthese* 198, pages 1011–1027.

²⁸ Cushing S. 2003. “Against “Humanism”: Speciesism, Personhood, and Preference”. *Journal of Social Philosophy*, 34, 567.

²⁹ Animal Welfare Act 1999 No 142 (as at 08 September 2018), Public Act 2 Interpretation – New Zealand Legislation. legislation.govt.nz with Animal Welfare Act 1999 No 142 (as at 08 September 2018), Public Act 85 Restrictions on use of non-human hominids – New Zealand Legislation.

constitution of 2002 officially guaranteed rights to all animals. This made the country the first one in the EU to do so³⁰.

Since the 1970s, the attitudes towards exploiting apes have been changing, with people amending their approach based on the intelligence of the species.³¹ It is overall irrational knowing that chimpanzees' intelligence levels are comparable to a human 4-year-old, yet legally, they are treated like a chocolate bar³². This approach, however, opens a Pandora box. Opposers of speciesism or animal activists convey an argument that is hard to refute objectively — if intelligence is what we are willing to sacrifice the exploitation for, why are other species, even more intelligent than apes at times (such as dolphins, a commonly known example) granted the same protection. And further, why do we then not exploit the disabled individuals of intelligent species, such as humans, if their experience is not full and therefore less valuable. It is a controversial line of thinking and one that can also be argued with but it ultimately illustrates that it is hard to justify selectivism and speciesism as such, leaving ethics alone.

Final notes

With each argument 'for' or 'against' patenting of living beings comes a rebuttal³³. This article is just a mere introduction, serving to signal the unethicity of the aforementioned patenting laws to a wider audience. Ultimately, patenting reflects an inappropriate sense of human control over animal life and the rightfulness of benefiting off others' potential harm, misery, or simple inability to decide over own faith. Linked to such, it has been said that developing transgenic animals, encouraged by patenting, will lead to more animal suffering (due to the inherent

³⁰ Ortolani G. 2018. "Citizen Ape: The fight for personhood for humans' closest relatives". Mongabay. <https://news.mongabay.com/2018/10/citizen-ape-the-fight-for-personhood-for-humans-closest-relatives/> accessed 22 August 2021.

³¹ Ortolani G. 2018. "Citizen Ape: The fight for personhood for humans' closest relatives". Mongabay. <https://news.mongabay.com/2018/10/citizen-ape-the-fight-for-personhood-for-humans-closest-relatives/> accessed 22 August 2021.

³² Motson F. 2021. "Geronimo the alpaca – the case for animals having the same legal rights as people". The Conversation. <https://theconversation.com/geronimo-the-alpaca-the-case-for-animals-having-the-same-legal-rights-as-people-166197> accessed 23 August 2021.

³³ An example coming from: Schrecker T et al. 1997. "Ethical Issues Associated with the Patenting of Higher Life Forms". Westminster Institute for Ethics and Human Values McGill Centre for Medicine, Ethics and Law, v.

uncertainty of the procedures), as in comparison to how animals are generally treated through selective breeding and crossbreeding³⁴.

Another interesting matter to consider is the harmful impact of animal patenting on the environment. This ultimately pertains to the introduction of transgenic animals into the wild, when they are ‘invented’ and patented, which may pose a threat to biodiversity³⁵. Again, the power of incentive must be recalled. Moreover, something one might not even dwell upon here is the impact patenting has on agriculture. **The introduction of newer species may affect traditional farming or force farmers to carry higher costs of production³⁶. This would affect the most vulnerable, that is, the farmers of the developing world.** Technological development brings much-wanted improvement of certain processes or facilitation of work, but may also create costs which are not thought of right away.

Conclusion

Patenting of animals, big or small, seems to be problematic ethically, through the provision of encouragement for exploitation and unjust profiting off other living beings. It may also stand against the recognised animal rights. **Respecting animals is not a mere choice, but rather a moral obligation that becomes obvious when one comes to understand the immorality and insubstantiality of speciesism.**

³⁴ “Chapter 8 Patenting of Animals— Ethical Considerations”. Princeton.

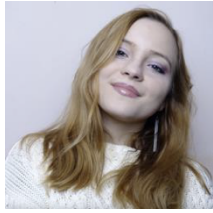
<https://www.princeton.edu/~ota/disk1/1989/8924/892410.PDF> accessed 22 August 2021.

³⁵ An article on the topic of gene drive organisms legislation will be published by INE later this year.

³⁶ “Chapter 8 Patenting of Animals— Ethical Considerations”. Princeton.

<https://www.princeton.edu/~ota/disk1/1989/8924/892410.PDF> accessed 22 August 2021.

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