

Report on a discussion about 'Animal Health and Welfare: Breeding for extreme conformations in dogs and cats' at the European Parliament in Brussels on 26 June, 2018

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Introduction

The dog has the honour (and increasingly also considered the misfortune) of being the first species of plant or animal domesticated by man (Galibert et al., 2011). Domestication is an ongoing process whereby humans progressively modify physiological and behavioural traits in animals to meet the functional or aesthetic needs of their human masters (Galibert et al., 2011). Since domestication from the wolf *Canis lupus* around 10,000 years ago (Vilà et al., 1997), the domestic dog *Canis familiaris* has now become the most phenotypically (bodysize, conformation and behaviour) diverse mammalian species on Earth (Wayne et al., 2006). And while variety may be the spice of life, too much can lead to indigestion. And so it appears to be with the domestic dog, and more recently with the domestic cat, where never-ending tinkering with the morphology of dog and cat breeds is associated with expanding lists of conformation-associated diseases. Each of the 50 most popular breeds in the UK has at least one reported conformational predisposition to disease (Summers et al., 2010).

Early breed selection in dogs was driven heavily by selection towards better adapted types for working purposes such as herding, guarding and hunting or just as companion pets that were pleasing to their owners (Galibert et al., 2011). However, especially over the past 150 years, the emphasis on working attributes has diminished whilst meeting the complex emotional needs of owners for distinctive and desirable pets has become a prime driver for breed development and popularity (Sandøe et al., 2017). One example of selection to meet these complex emotional needs has been the increasing desirability of extreme morphological characteristics that has been manifest over the past 150 years since the advent of dog showing

and breeding as a human social validator (Sampson and Binns, 2007). However, these extreme conformational traits (no matter how ‘cute’ these may be to owners who do not have to live in these bodies) have also been associated with increased risks of certain diseases with consequent pain and mental suffering for many animals of extreme breeds (Serpell, 2002). In both cats and dogs, brachycephalism is associated with breathing problems (O'Neill et al., 2015, Farnworth et al., 2016, Packer et al., 2015b, Liu et al., 2017), ocular disease (O'Neill et al., 2017a, Packer et al., 2015a) and dystocia (O'Neill et al., 2017b). Chondrodystrophy in Dachshunds is associated with intervertebral disc disease (Packer et al., 2013).

Osteochondrodysplasia in Scottish fold cats is associated with degenerative joint disease (Takanosu, 2008, Malik et al., 2008). Giant dogs breeds have shortened lives (O'Neill et al., 2013, Adams et al., 2010) and are predisposed to osteosarcoma (Rosenberger et al., 2007). And so the story goes on; moving towards extremes of conformation often coincides with moving towards extremes of welfare acceptability that raise legal, ethical and moral issues for owners, breeders and even the by-stander section of the general public that may never have owned, or even plan to own, a dog. From a legal perspective, owners in the UK have a duty of care imposed upon them through the Animal Welfare Act 2006 (Legislation.Gov.UK, 2006b), the Welfare of Animals Act (Northern Ireland) 2011 (Legislation.Gov.UK, 2011) and the Animal Health and Welfare (Scotland) Act 2006 (Legislation.Gov.UK, 2006a) to assure “protection from pain, suffering, injury and disease” in their animals. Moral and ethical issues relating to breeding for extreme conformations have been widely debated in the UK and elsewhere over the past decade (Bateson, 2010, Rooney and Sargan, 2008, McGreevy, 2007). And even the non-owners of dogs and cats have been implicated in this welfare issue by encouraging media portrayals of extreme breeds as comical or cute (Packer et al., 2017, Ghirlanda et al., 2014, Ghirlanda et al., 2013).

The welfare issues from extreme conformations have been compounded in recent years by dramatic rises in popularity of some extreme conformations. In the UK, Kennel Club registrations for French Bulldogs have risen by 2964 per cent increase in the last ten years; in 2018, French Bulldogs overtook the Labrador Retriever as the UK's most popular dog breed for the first time since records began (The Kennel Club, 2018). Universal support for strategic and co-ordinated plans to limit the welfare impacts from the brachycephalic extreme conformation led to the formation of the Brachycephalic Working Group in the UK that includes members from academia, breed clubs, veterinary profession, animal charities and owners (BWG, 2018).

These big questions around extreme breeding and how to tackle the problem were the subject of a lunch discussion held at the European Parliament in Brussels on 26 June, 2018. The meeting was jointly organised the EU Cat and Dog Alliance (EU Dog and Cat Alliance, 2018) the Federation of Companion Animal Veterinary Associations (FECAVA) (FECAVA, 2018), the Federation of Veterinarians of Europe (FVE) (FVE, 2018). Hosted by two Members of the European Parliament committed to animal welfare, *Petras Austrevicius* and *Marlene Mizzi*, the meeting was a platform to develop and express a holistic view of the extreme conformation issues by a spectrum of invited speakers with a follow-on open-floor session for comment allowing many stakeholders to share their viewpoints and insights and to suggest constructive ways forward.

The invited speakers

Petras Austrevicius MEP (Lithuania) opened the meeting by welcoming the speakers and the discussions. His view was that the depth of the problems from extreme breeding required extreme solutions and he hoped that the meeting would reach extreme conclusions. He was followed by Marlene Mizzi MEP (Malta) who spoke passionately via a video message to state that animals have rights, need dignity and deserve our respect. She was emphatic that we need to be the voice of our innocent friends and that the engineering of animals needed to be addressed before it becomes more disgraceful than it already is. She believed that love for animals should transcend political affiliation to get the optimal solutions for animal welfare.

The first invited speaker was Monique Megens, representative and past president of FECAVA that has member veterinary bodies in 40 EU countries. Monique deftly set out the breadth of the welfare issues associated with extreme conformation by listing several examples of severe ensuing welfare problems. These included brachycephalism, sloping backs in German shepherd dogs, degenerative joint disease in Scottish fold cats, alopecia in Donstoy cats and also the problems from the ever-expanding demand for new mutations for novel extreme conformational types. Her view was that these are complex issues that will require complex solutions involving many stakeholders. To this end, FVE and FECAVA have released a joint position paper on breeding healthy dogs: *The effect of selective breeding on the health and welfare of dogs* (FVE and FECAVA, 2018) with a core message that health and welfare should go before looks.

Next up was Kristin Prestrud of the Norwegian Kennel Club who discussed the great variation in anatomy and behaviour that exists across breeds and that was originally driven by work requirements. However, over time, these oddities were seen as desirable features that became more extreme: short legs have gotten shorter, heavy bodies have gotten heavier, long coats have gotten longer, loose skin has gotten looser, long ears have gotten longer and so forth. However, there are physiological and functional limits for extreme anatomical traits; and when these limits are passed, the function, welfare and health of these dogs are threatened. For many conformational features, research is needed to define these limits which are currently unknown. As a specific action, all Nordic countries use a tool called breed-specific instructions (BSI) to ensure functional and healthy anatomy in show winners (The Nordic Kennel Clubs, 2018).

Catherine Dobbie of Dogs Trust (Dogs Trust, 2018) explored the social aspects of extreme breeding and described the paradox between suffering in animals such as dogs struggling to walk or breathe due to extreme conformations and the contrarian reaction of many humans who thought that these features and behaviours were ‘cute’. She described the vicious circle between the public’s perception of extreme features as ‘cute’ that promoted widespread use of extreme breeds in advertising and social media and which, in consequence, just further fuelled the desirability and demand for these extreme types via pester power. Modern expectation of instant gratification meant that many owners rushed into buying their new dog without considering the health, welfare or the origin of such animals. The result of these changes meant that puppies are now highly tradable commodities and unscrupulous puppy dealers can make large amounts of money with little risk compared to activities such as drug smuggling. Catherine’s advice was to educate owners both about the impacts of extremes conformation on the animals and also on how best to buy or acquire a pet. However, she also saw a role for legislation to ensure welfare improvement was gained.

Petra Sindern of the German Veterinary Practitioners’ Association (BpT) explained that extreme breeding was a form of *qualzucht* ‘torture breeding’ and described some of the actions from the working group that had been set up in Germany. Only 15% of dogs in Germany are registered with the German Kennel Club (VDH) so targeting the general public directly was seen as a priority rather than working through the VDH. A letter to advertisers had asked them to promise not to use photographs of short-nosed dogs or cats in their next media campaign. Educational materials had been produced to raise awareness among dog

owners of the welfare impacts of extreme breeding. Functional health tests were being developed for extreme breeds. She also highlighted the collaboration between state veterinary officers and practitioners. Official vets are empowered to sanction animal breeders if their animals are not healthy and these animals can be sent to specialist veterinarians for fuller assessment.

Rony Doedijns, CEO of the Dutch Kennel Club (DKC), described the health, well-being and social behaviour of dogs as a priority and that extremes in any form must be prevented. He presented the *Fair Breeding Plan* (van Beheer, 2014) which was a multi-stakeholder programme supported by the Dutch government. The programme had 4 elements: 1. education of breeders, judges, behaviourists and veterinarians; 2. health and welfare regulations for all pedigree dogs, 3. An awareness campaign promoting the advantages of purebred dogs and 4. breed-specific regulation including fitness tests for breeds like bulldogs. Rony's advice was to co-operate instead of legislating. We should acknowledge and take responsibility for the problems but he did not believe that there was a case for banning any breeds.

Gudrun Ravetz, past president of the British Veterinary Association (BVA), explored the role of regulators in relation to extreme breeding and called for better enforcement and stricter sanctions. She stressed the importance of good data so that actions can be meaningful, evidence-based, enforceable and enforced, and well promoted. An examples of potentially useful data in the UK included the joint Kennel Club and veterinary profession database of reported corrective surgeries and caesarean sections in pedigree dogs, although she reported that sadly only 3% of vets were reporting through this system. Gudrun described an alternative and more successful approach whereby practices could share de-identified clinical data with research databases such as VetCompass (VetCompass, 2018) or SAVSNET (SAVSNET, 2018) to see what's happening across the entire dog population. Gudrun stressed the need for collaboration across stakeholders to successfully tackle the extreme breeding issue. Additionally, she saw value in review of breed standards, education, use of existing legislation and efforts to prevent illegal trade. She also discussed the UK's new animal welfare legislation *The Animal Welfare (Licensing of Activities Involving Animals) (England) Regulations 2018* that mandates that no puppy under 8 weeks may be sold or permanently separated from its mother and that puppies can only be shown to prospective purchasers in the presence of the puppy's biological mother (Legislation.Gov.UK, 2018).

The open-floor discussion

The discussion was moderated by Andrew Robinson, FVE vice president, and included many and varied comment and suggestion from the attendees. New legislation (e.g. to control internet sales) was considered to be useful but was felt to be a slow option when more immediate action was needed. The variable, but often low, proportion of dogs that fall under the control of the national kennel clubs was also seen as a problem; non-kennel club dogs and their owners were seen as harder to influence legally. Application of tax evasion and serious organised crime legislation was suggested as another legislative option to fight illegal importation and sale. Given that many dogs and their owners fall outside of legislative control, another approach was to focus regulatory control on online marketing instead. There were several suggestions that reduction in the demand for extreme breeds was a more realistic and effective tool to improve welfare than changing the health of these animals that are bred.

The need for, and the power of, good data and science to improve welfare was stressed. A co-ordinated multi-stakeholder approach was felt to be important to ensure corporate social responsibility. Ongoing breeding of extreme breeds that are sick from the moment of their birth was suggested to be indefensible and there were some views that ‘bad’ breeds should be banned. At the very least, another view was that there should be a ban on kennel clubs recognising any new breeds that only incentivises other breeds to become more extreme to maintain their individuality. Veterinary review (by FVE and FECAVA) of breed standards to remove stipulations that were contrary to good health (e.g. chondrodystrophy) was suggested. There was also discussion that vets who have to treat dogs affected with health problems due to extreme conformation are being ethically compromised and that legislation should also be considered to cover the ethical dilemmas as well as the welfare problems. It was also suggested that show judges need to be admonished for awarding prizes to inappropriate dogs such as those that are obese. Outcrossing was also suggested as a route to improving health within breeds.

A number of delegates felt that greater emphasis should be placed on defining what was ‘normal’ for a dog rather than for a breed; and that the public should be made aware that all breeds should meet these ‘normal for a dog’ criteria. It was felt that brachycephalism should be reported as a pathology/disease on veterinary clinical records. Further questions centred on how to change the public’s perception of what was ‘lovely’ and ‘cute’ in a dog to better match with good welfare; and how to make popular, but extreme, breeds unfashionable.

In summary, Andrew Robinson concluded that the issues around extreme breeding were complex with a great number of options for control that needed to be considered. These included, but were not limited to, bans on advertising and importation, setting up new health schemes, and licensing of owners and dogs. Ultimately, the options chosen would be driven by what was practical and socially acceptable. The plan from the meeting was that a list of the possible actions that were discussed would be generated and provided to the MEPs to consider further. There was a general acceptance that action was needed to limit the harms from extreme conformations in dogs and cats.

References

- ADAMS, V. J., EVANS, K. M., SAMPSON, J. & WOOD, J. L. N. 2010. Methods and mortality results of a health survey of purebred dogs in the UK. *Journal of Small Animal Practice*, 51, 512-524.
- BATESON, P. 2010. Independent inquiry into dog breeding. Cambridge: University of Cambridge.
- BWG. 2018. *The Brachycephalic Working Group* [Online]. The Brachycephalic Working Group. Available: <http://www.ukbwg.org.uk/> [Accessed July 10 2018].
- DOGS TRUST. 2018. *Dogs Trust* [Online]. Dogs Trust,. Available: <https://www.dogstrust.org.uk/> [Accessed July 10 2018].
- EU DOG AND CAT ALLIANCE. 2018. *EU Dog and Cat Alliance* [Online]. European Dog & Cat alliance. Available: <https://www.dogandcatwelfare.eu/> [Accessed July 10 2018].
- FARNWORTH, M. J., CHEN, R., PACKER, R. M. A., CANEY, S. M. A. & GUNN-MOORE, D. A. 2016. Flat feline faces: Is brachycephaly associated with respiratory abnormalities in the domestic cat 'felis catus'? *PLoS ONE*, 11, e0161777.
- FECAVA. 2018. *Federation of Companion Animal Veterinary Associations* [Online]. FECAVA. Available: <https://www.fecava.org/> [Accessed July 10 2018].
- FVE. 2018. *The Federation of Veterinarians of Europe* [Online]. FVE. Available: <http://www.fve.org/> [Accessed July 10 2018].
- FVE AND FECAVA 2018. Breeding healthy dogs: The effect of selective breeding on the health and welfare of dogs.: FVE and FECAVA,.
- GALIBERT, F., QUIGNON, P., HITTE, C. & ANDRÉ, C. 2011. Toward understanding dog evolutionary and domestication history. *Comptes Rendus Biologies*, 334, 190-196.
- GHIRLANDA, S., ACERBI, A. & HERZOG, H. 2014. Dog movie stars and dog breed popularity: A case study in media influence on choice. *PLOS ONE*, 9, e106565.
- GHIRLANDA, S., ACERBI, A., HERZOG, H. & SERPELL, J. A. 2013. Fashion vs. Function in cultural evolution: The case of dog breed popularity. *PLoS ONE*, 8, 1-6.
- LEGISLATION.GOV.UK. 2006a. *Animal Health and Welfare (Scotland) Act 2006* [Online]. Crown. Available: <https://www.legislation.gov.uk/asp/2006/11/contents> [Accessed July 25 2018].
- LEGISLATION.GOV.UK. 2006b. *Animal Welfare Act 2006* [Online]. Crown. Available: <https://www.legislation.gov.uk/ukpga/2006/45/contents> [Accessed July 10 2018].

- LEGISLATION.GOV.UK. 2011. *Welfare of Animals Act (Northern-Ireland) 2011* [Online]. Crown. Available: <https://www.legislation.gov.uk/nia/2011/16/contents> [Accessed July 10 2018].
- LEGISLATION.GOV.UK. 2018. *The Animal Welfare (Licensing of Activities Involving Animals) (England) Regulations 2018* [Online]. Crown. Available: <https://www.legislation.gov.uk/ukdsi/2018/9780111165485> [Accessed July 10 2018].
- LIU, N.-C., TROCONIS, E. L., KALMAR, L., PRICE, D. J., WRIGHT, H. E., ADAMS, V. J., SARGAN, D. R. & LADLOW, J. F. 2017. Conformational risk factors of brachycephalic obstructive airway syndrome (BOAS) in pugs, French bulldogs, and bulldogs. *PLOS ONE*, 12, e0181928.
- MALIK, R., ALLAN, G. S., HOWLETT, C. R., THOMPSON, D. E., JAMES, G., MC, W. C. & KENDALL, K. 2008. Osteochondrodysplasia in Scottish Fold cats. *Australian Veterinary Journal*, 77, 85-92.
- MCGREEVY, P. D. 2007. Breeding for quality of life. *Animal Welfare*, 16, 125-128.
- O'NEILL, D. G., CHURCH, D. B., MCGREEVY, P. D., THOMSON, P. C. & BRODBELT, D. C. 2013. Longevity and mortality of owned dogs in England. *The Veterinary Journal*, 198, 638-643.
- O'NEILL, D. G., JACKSON, C., GUY, J. H., CHURCH, D. B., MCGREEVY, P. D., THOMSON, P. C. & BRODBELT, D. C. 2015. Epidemiological associations between brachycephaly and upper respiratory tract disorders in dogs attending veterinary practices in England. *Canine Genetics and Epidemiology*, 2, 10.
- O'NEILL, D. G., LEE, M. M., BRODBELT, D. C., CHURCH, D. B. & SANCHEZ, R. F. 2017a. Corneal ulcerative disease in dogs under primary veterinary care in England: epidemiology and clinical management. *Canine Genetics and Epidemiology*, 4, 5.
- O'NEILL, D. G., O'SULLIVAN, A. M., MANSON, E. A., CHURCH, D. B., BOAG, A. K., MCGREEVY, P. D. & BRODBELT, D. C. 2017b. Canine dystocia in 50 UK first-opinion emergency-care veterinary practices: prevalence and risk factors. *Veterinary Record*, 181.
- PACKER, R., MURPHY, D. & FARNWORTH, M. 2017. Purchasing popular purebreds: investigating the influence of breed-type on the pre-purchase motivations and behaviour of dog owners. *Animal Welfare*, 26, 191-201.
- PACKER, R. M. A., HENDRICKS, A. & BURN, C. C. 2015a. Impact of facial conformation on canine health: Corneal ulceration. *PLoS ONE*, 10, 1-16.
- PACKER, R. M. A., HENDRICKS, A., TIVERS, M. S. & BURN, C. C. 2015b. Impact of facial conformation on canine health: Brachycephalic Obstructive Airway Syndrome. *PLoS ONE*, 10, e0137496.
- PACKER, R. M. A., HENDRICKS, A., VOLK, H. A., SHIHAB, N. K. & BURN, C. C. 2013. How long and low can you go? Effect of conformation on the risk of thoracolumbar intervertebral disc extrusion in domestic dogs. *PLoS ONE*, 8, e69650.
- ROONEY, N. & SARGAN, D. 2008. Pedigree dog breeding in the UK: a major welfare concern? In: RSPCA (ed.). Horsham, West Sussex: RSPCA.
- ROSENBERGER, J. A., PABLO, N. V. & CRAWFORD, P. C. 2007. Prevalence of and intrinsic risk factors for appendicular osteosarcoma in dogs: 179 cases (1996-2005). *Journal of the American Veterinary Medical Association*, 231, 1076-1080.
- SAMPSON, J. & BINNS, M. M. 2007. The Kennel Club and the early history of dog shows and breed clubs. In: OSTRANDER, E. (ed.) *The Dog and Its Genome*. CSHL Press.
- SANDØE, P., KONDRUP, S. V., BENNETT, P. C., FORKMAN, B., MEYER, I., PROSCHOWSKY, H. F., SERPELL, J. A. & LUND, T. B. 2017. Why do people buy dogs with potential welfare problems related to extreme conformation and inherited

- disease? A representative study of Danish owners of four small dog breeds. *PLOS ONE*, 12, e0172091.
- SAVSNET. 2018. *SAVSNET* [Online]. University of Liverpool. Available: <http://www.liv.ac.uk/SAVSNET/> [Accessed July 10 2018].
- SERPELL, J. A. 2002. Anthropomorphism and Anthropomorphic Selection: Beyond the "Cute Response". *Society and Animals*, 10, 437-454.
- SUMMERS, J. F., DIESEL, G., ASHER, L., MCGREEVY, P. D. & COLLINS, L. M. 2010. Inherited defects in pedigree dogs. Part 2: Disorders that are not related to breed standards. *The Veterinary Journal*, 183, 39-45.
- TAKANOSU, M. 2008. Incomplete dominant osteochondrodysplasia in heterozygous Scottish Fold cats. *Journal of Small Animal Practice*, 49, 197.
- THE KENNEL CLUB. 2018. *French Bulldogs overtake Labradors as UK's most popular dog breed* [Online]. The Kennel Club Limited. Available: <https://www.thekennelclub.org.uk/press-releases/2018/june/french-bulldogs-overtake-labradors-as-uks-most-popular-dog-breed/> [Accessed July 10 2018].
- THE NORDIC KENNEL CLUBS 2018. Breed Specific Instructions (BSI) regarding exaggerations in pedigree dogs. In: UNION, N. K. (ed.) 2nd ed.
- VAN BEHEER, R. 2014. 'FAIRFOK' - Fair Breeding Plan. Amsterdam, Nederland.
- VETCOMPASS. 2018. *VetCompass: Health surveillance for UK companion animals* [Online]. London: RVC Electronic Media Unit. Available: <http://www.rvc.ac.uk/VetCOMPASS/> [Accessed March 30th 2018].
- VILÀ, C., SAVOLAINEN, P., MALDONADO, J. E., AMORIM, I. R., RICE, J. E., HONEYCUTT, R. L., CRANDALL, K. A., LUNDEBERG, J. & WAYNE, R. K. 1997. Multiple and ancient origins of the domestic dog. *Science*, 276, 1687-1689.
- WAYNE, R. K., LEONARD, J. A. & VILA, C. 2006. Genetic analysis of dog domestication. In: ZEDER, M. A. (ed.) *Documenting domestication: new genetic and archaeological paradigms*. Berkeley, California: University of California Press.