Innate health concept: welfare revolution in body conformation in dogs

Dan O'Neill
Royal Veterinary College

Summary overview

Humanity has become entranced into seeing individual dogs as a 'breed' rather than as a 'dog' or even an 'animal'. Within the concept of a breed, it can be 'normal' or desirable or even required to have extreme conformations such as a short muzzle, an inflexible deformed spine, bulging eyes or a congenitally shortened tail. But the appalling scale of the severe health and welfare price paid by the dogs themselves consequent to humanity's cognitive illusion of 'dog as breed' rather than 'dog as animal' are now being revealed by big data analyses of veterinary clinical records and other research. This presentation will propose an alternative and more animal welfare-friendly approach whereby each dog is viewed as a natural animal. From this perspective, it becomes essential for each dog (i.e. now seen as a natural animal) to be able to breathe and sleep easily (needs a muzzle), lick their rear end (needs a flexible spine), blink fully (needs a deep orbital socket) and communicate with other dogs (needs a natural length tail). I welcome to a new world for dogs where our mental models of what a dog is are underpinned by the Innate Health Concept.

Background

Since our human ancestors moved towards hunter-gatherer lifestyles, humanity has progressively exploited a range of animal species for tools, food, clothing, work, transport, hunting, sport, science and companionship (Mithen 1999, Shipman 2010). This human-animal connection became even more intimate from around 30,000 years ago when humans began domesticating plants and animals to generate substantial advantageous results for humanity (Vigne 2011). The domestic dog (*Canis lupus familiaris*) is considered as one of the first mammalian species to be domesticated, with fossil records indicating distinct domestication processes beginning in various parts of the world from 30,000-15,000 years ago (Freedman and Wayne 2017, McHugo, Dover and MacHugh 2018). Once domesticated, Homo sapiens began the process of more actively subverting the genetic, physiological and behavioural biology of dogs by selecting both consciously and unconsciously over thousands of years towards traits in domestic dogs that were desirable to humans (Range and Marshall-Pescini 2022). Dog types would have been created with specific working functions within which there were still widely varying size, conformation, colour and coat type (Jung and Pörtl 2019). Given that these early dog types existed for functional purposes, then good health, vitality, longevity and reproductive function were dominant drivers of breeding decisions and the actual appearance of the dogs remained of low priority (Worboys, Strange and Pemberton 2018).

However, with the advent of conspicuous wealth in the Victorian era, wealthy parts of human society became increasingly interested in defining and distinguishing types of dogs by their appearance rather than their function. This change led to the formal invention and propagation of the concept of 'dog breed' (Worboys, Strange and Pemberton 2018). To oversee this new hobby and industry, the Kennel Club was established in England in 1873 to operate a register of dogs and to oversee canine activities including dog shows (The Kennel Club 2025). Breed standards were drafted as a picture in words that describes each breed with the aim of enabling dogs to be shown and judged against the ideal for each breed (The Kennel Club 2025). Each breed was rapidly defined to promote moves towards all dogs within each breed looking as similar as possible to each other while at the same time ensure that each of these newly minted breeds were as distinct as possible to all other breeds (Worboys, Strange and Pemberton 2018). New breeds were created by identifying individual animals with novel and distinctive

phenotypes resulting from random mutations that would not have necessarily persisted in nature and then by heavily inbreeding these mutated dogs to fix these desired conformations in future generation (Ostrander *et al.* 2017). The focus in those early days of breed creation was on generating as much phenotypic variation across the range of new breeds as possible (Worboys, Strange and Pemberton 2018).

While there was some awareness a century ago about the negative health impacts from some of these new non-natural phenotypes, this did little to stem the tide of extreme phenotypes being introduced and normalised for dogs, perhaps because these harms could be trivialised compared to other larger health issues such as viral disease (e.g distemper) (Skipper 2020). And while animals have always suffered, animal welfare as a distinct science only really emerged until the past 50 years so there was no formal theoretical and evidential basis in those early days to enable challenge on a welfare basis to harmful selection towards novel phenotypes (Mench 2018 and Broom 2011). However, with recent improvements in understanding about dog welfare and a growing evidence base on how extreme body conformation predisposes to disorder risk and suffering, it is timely now to reassess our ongoing societal acceptance of extreme phenotypes in dogs using our new welfare lens (Proschowsky *et al.* 2025). Critical for this move towards assisting humans to prioritise the needs of the dogs over the whims of humans is a need to develop a new theory and more expansive evidence base that can objectively define and assess conformations in dogs in terms of health and welfare impact. This presentation will propose how the innate health concept can fill this gap and help humanity to view conformation in dogs from the dog's perspective rather than the human perspective.

'The Innate Health Concept'

I have been working on developing The Innate Health Concept over the past 15 years of research within VetCompass at the RVC. This concept is based on the welfare principle that every animal, regardless of type and breed, should be capable of performing all the typical activities necessary for their wellbeing within the anatomical, physiological and behavioural evolutionary norms for the species and the dog's stage of life. A key element of dogs having good innate health is that they have body shape (ie conformation) that provides them with the physical capacity to carry out natural behaviours and activities such as freely and fully breathing, blinking, sleeping, flexing their spine, wagging their tail and reproducing. Planned and deliberate production of dogs with body shapes that prevent or reduce the capacity of dogs to perform these natural activities can be considered as actively counter to producing dogs with good innate health. These negative outcomes for dogs can then be considered in terms of legal or social or welfare or health or ethical or moral frameworks to try to establish a better way of humans keeping dogs that enable humans to enjoy the owning of dogs while dogs also enjoy being owned by humans. In this presentation, I will explore some specific physical and functional attributes that can be assessed on dogs to evaluate innate health and also offer metrics on which to ensure future dog production, acquisition, promotion and showing moves towards better innate health as an intrinsic part of decision making.

Extreme conformation

A key component of the innate health concept described above is the production of dogs with a natural body shape that enables all dogs to have the capacity to live the natural life of a dog. Body shapes that violate this natural law can be considered as extreme. 'Extreme conformation' in dogs defines a physical appearance that has been so significantly altered by humankind away from the ancestral natural canine appearance that affected dogs commonly suffer from poor health and welfare, with negative impacts on their quality and quantity of life*'* *(*ICECDogs 2025*)*.

Despite an overwhelming evidence base on the suffering that results from unnatural body shapes in dogs, ongoing human demand for dogs with extreme physical conformation continues to result in millions of dogs produced each year without the capacity for good innate health and who predictably go on to suffer from significant welfare issues related to their avoidable and unnecessary extreme conformation. These welfare issues include difficulties breathing (O'Neill *et al.* 2021 and O'Neill *et al.* 2022), eye problems (O'Neill *et al.* 2017 and O'Neill *et al.* 2022), spinal issues (Packer *et al.* 2013), skin fold infections (O'Neill *et al.* 2022), reproductive problems (O'Neill *et al.* 2022) and many more. Dogs with extreme conformation have dramatically reduced life-expectancy showing the cumulative harmful effects of deviation from a natural body shape on overall function and survival (Teng *et al.* 2022).

The evidence base

Much of the evidence used to generate the Innate Health Concept has been derived over the past decade from the VetCompass Research Programme at the Royal Veterinary College in the UK. VetCompass was developed from 2010 onwards as a response from the frontline arm of the veterinary profession to the evidence gap that existed on research output relevant to primary care practitioners and that put animal welfare as a primary stated goal of the work (O'Neill *et al.* 2014). VetCompass shares deidentified data on all animals under veterinary care at a wide range of partner practices and practice groups (VetCompass 2025). The VetCompass concept is to share the large volumes of electronic information that veterinary practices already record on their practice management systems (PMS), with no requirement for participating practices to record any additional data.

VetCompass is compliant with general data protection regulations (UK GDPR) and has full ethical approval. The fields that are shared include species, breed, sex, neuter, date of birth, colour, insurance, microchip and bodyweight. All clinical notes and items sold are also shared, along with relevant dates. Clients are offered opt-out consent for sharing data relating to their own animals. Each researcher signs a stringent agreement specifying their data security and usage responsibilities before being given access to the required study denominator of animals for their work. Authors and research teams that work on UK clinical data can be based in any country worldwide. VetCompass researchers work in a single virtual research space and build on the same underlying dataset. Currently, 1803 (>30% of all) UK veterinary clinics have shared data on 29 million companion animals (including 13 million dogs), 83 million measurements (e.g. bodyweights, body condition score), 350 million clinical notes and 862 million treatments. Up to March 2024, over 160 VetCompass peer-reviewed papers have been published that are freely available on the VetCompass website (VetCompass 2025). These papers provide the evidential foundation underpinning the innate health concept.

Legislation in England

The basis for the legal protection of dog health and welfare in England and Wales is provided by the Animal Welfare Act (AWA) 2006 (Legislation.Gov.UK 2006). In particular, section 4 of the AWA states a person commits an offence if any action by them, or failure to act, causes an animal to experience unnecessary suffering. Section 9 of the Act goes on to impose positive duties upon those who have animals in their care or control and requires that all reasonable steps are taken to ensure the welfare needs of that animal are met. These welfare needs include the need to be able to exhibit normal behaviours and the need to be protected from pain, suffering, injury and disease.

These foundations for safeguarding dog welfare in England under the AWA were enhanced in 2018 with the Animals Welfare (Licensing of Activities Involving Animals) (England) Regulations (LAIA Regs) (Legislation.Gov.UK 2018). Commercial dog breeders are legally required to apply for a license from their local authority to breed dogs and, if successful, must abide by the provisions in the LAIA Regs. In particular, Schedule 6 (6) (5) states that: "*No dog may be kept for breeding if it can reasonably be expected, on the basis of its genotype, phenotype or state of health, that the breeding from it could have a detrimental effect on its health or welfare or the health or welfare of its offspring".* Commercial breeding applies to breeders who have three or more litters per year or who sell (or advertise for sale) dogs in the course of a business (Crown 2025).

Therefore, the actions of a licensed breeder in mating two dogs together could give rise to an offence if that breeder could reasonably have known that due to the genotypes/ phenotypes of the dogs involved, the resulting puppies were likely to be born with, or would be likely to go on to develop, health and welfare issues. DEFRA has issued statutory guidance on what this means for breeders (DEFRA 2024). Essentially, breeders must take all reasonable steps to breed only from dogs that are in 'good physical and genetic health' and who are 'fit for function'. In particular, dogs must have good physical and genetic health, have the ability to breathe normally, exercise freely, and be able to see and be physically fit.

Conclusions

The innate health concept offers a new way to view health in companion animals that is based on an inherited capacity for a natural life. This allows the innate health status of animals to be established even before the animals are conceived and therefore for animal production to avoid producing animals with poor innate health if

humanity decides this is a desirable goal. This is in contrast to the current biomedical concept of health which is based on the existence of a formal clinical diagnosis of disease to establish deviation from good health and which has consistently failed to protect the health and welfare of dogs from issues related to extreme conformation over the past century. The innate health concept offers a welfare revolution in how we all can view companion animal health – the next question is whether humanity is ready yet to put the welfare of dogs ahead of our own desires to own extreme conformation animals.

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