Presentation abstracts

Abstract - Paul McGreevy

Equitation Science and its contributions to horse welfare

Horses unquestionably hold a special place in the hearts and minds of many Australians. Historically, they have acted as ambassadors for other, perhaps less charismatic, members of the animal kingdom. Images of horses being whipped on the streets of Victorian England are recognised as a major impetus to the birth of the animal protection movement as we know it today. These were exhausted work and carriage horses, thrashed to deliver more effort where none was possible. Observing their plight inspired the creation of the world's first animal cruelty legislation and enforcement regime. Paradoxically, despite this pivotal role, horses have yet to benefit fully from the strides that the animal protection movement has since made for other species. Today, horses are still whipped in public, but only in the name of sport.

Horses have missed out when it comes to advances in behavioural science too. Established traditional equestrian techniques bypassed the findings of modern learning theorists, including the principles of operant conditioning that have transformed dog training over the past 30 years. Accordingly, many observers now question the welfare of ridden horses since most are trained using negative reinforcement and pressurebased cues. Failure to define best practice in the use of aversive stimuli in equitation has contributed to the erosion of horse sports' social-license-to-operate.

In the two decades since the RSPCA Australia Seminar last focussed on horses, we have seen the emergence of equitation science; a multidisciplinary discipline that combines learning theory, ethology and physics to examine the salience and efficacy of horse-training techniques. It is removing emotiveness from the horse-riding welfare debate because it permits consideration and, in some cases, assessment of equine discomfort, pain and learned helplessness.

We have also seen the formation of the International Society for Equitation Science (ISES), a global group with strong Australian connections. ISES promotes the application of objective research and advanced practice which will ultimately improve the welfare of horses in their associations with humans. This Society has produced several science-based position statements that address key topics, including the consequences of restrictive nosebands and the use/misuse of leadership and dominance concepts in horse training. This presentation will examine how equitation science has advanced horse welfare and the obstacles it has confronted along the way.

Abstract - Kat Littlewood

Running into problems: Equine welfare during exercise

Given the degree of control or influence humans have over the lives of horses, it is our responsibility to ensure that they have good welfare. Humans keep and manage domestic horses for various purposes, including recreational riding and sporting activities such as racing, dressage, show jumping, eventing, endurance, hunting, polo, polocross, and western riding. However, horses engaged in strenuous exercise display physiological responses that approach the upper functional limits of key organ systems, in particular their cardiorespiratory systems. Factors that diminish these functional capacities might lead to horses experiencing unpleasant respiratory sensations, i.e., breathlessness. In this presentation, equine cardiorespiratory physiology and athletic performance will be used to illustrate the potential for various types of breathlessness to occur in exercising horses. The impact of management factors, such as rein and bit use, on the likelihood and intensity of equine breathlessness occurring during exercise will also be explored.

Abstract - Cathrynne Henshall

Brain train your horse - applying neuroscience to improve horse training and welfare

Research in cognitive and affective neuroscience has transformed our understanding of learning and emotion in animals and humans. The application of this knowledge to horse training could deliver many benefits to horses and their owners, as equine emotions and learning abilities rely on similar neural processes as other species. There are few available techniques to directly probe equine brain function, so the translation of these findings to horses is necessarily inferential; however, validated methodologies bridging this gap in human research can be applied to horses. Areas within neuroscience research with particular relevance for horse training and management include: how the brain processes the kinds of aversive stimuli commonly used in horse training; the effects of stress neurophysiology on learning; the interactions between new learning versus habit learning - an issue for retraining unwanted behaviour; and the prediction error concept - a dopamine influenced neural “teaching signal” that assists animals to make decisions that deliver the best outcomes for them. In human-horse interactions, behaviour provides the interface between neural activity and horses’ responses to training and environmental stimuli. Providing owners with a greater understanding, even at a simplified level, of the putative neural processes underpinning behaviour could assist them to improve their practices. For example, a knowledge of the workings of the habit and flexible learning neural networks and prediction errors could assist trainers to identify why horses may fail to learn a new habit or why they persist with unwanted behaviour despite extensive retraining. Alternatively, a knowledge of the effects of stress physiology could assist trainers to modify their practices to manage stress and enhance learning. The addition of neuroscience to inform horse training and management techniques could provide a mechanism to develop truly horse-centred training approaches that could improve welfare outcomes for horses and enhance human safety.

Abstract - Ashleigh Brown

Exploring barriers to welfare improvement - learnings from the working equid context

As animal behaviour and welfare sciences evolve, we are increasingly equipped with methodologies for assessing, and interpreting in welfare terms, the subjective experiences of non-human animals. Similarly, advancements in equine science render us better informed than ever before on application of these concepts to equine species, whose roles, relationships and interactions with humans typically differ from other animal groups. Despite the privilege of unprecedented access to research, resources and services to support equid welfare, evidence-based and welfare-focussed equid management is not yet consistently implemented, raising the question of why practice is not keeping pace with advancement of scientific knowledge.

An estimated 100 million working horses, donkeys and mules globally, predominantly in low-income and resource-poor contexts, are vulnerable to welfare impairment on account of poor knowledge of welfare needs; limited husbandry provisions; high work-loads; harsh living and working environments; and minimal access to professional animal health and welfare services. Accordingly, working equid welfare practitioners - operating at the intersection of animal welfare and international development - face multi-factorial challenges to effecting welfare improvement, be they socio-economic, cultural, educational or geo-political.

However, this complexity necessitates problem-solving, innovation and critical evaluation of prevailing norms, offering scope for valuable learning. Drawing upon experience from the working equid sector, this talk will explore emergent findings of relevance for cross-sectoral or inter-disciplinary application. In particular, themes of welfare issue prioritisation, barriers to effective amelioration and means of overcoming these will be considered.

Whilst specific physical and psychological demands upon equids are subject to contextual variation, their fundamental behavioural and welfare needs are consistent. Thus, regardless of the context, as equid welfare practitioners, advocates, stakeholders or supporters, we share a common objective of optimising welfare within the parameters of our respective constraints.

Abstract - Julie Fiedler

How important is public trust for the future of the horse sport sector?

Welfare is the common ground that can bring together people from diverse equestrian and racing interests to improve horses' everyday lives and performance. Reflecting on the markers for a functioning horse sector, such as national standards and plans for welfare, transport, biosecurity, and traceability, provides some guidance on where to go next. But is this enough? Without acknowledging the changing societal expectations towards animal welfare, horse activities risk losing relevance, a real threat to long-term sustainability. By exploring ideas such as developing industry-led concepts of animal safeguarding and practical, measurable improvements for events and businesses, we can shape our collective future with horses. Public trust is forward looking. It's not only what is said could be done, and to what standard, but the 'doing' of welfare that will maintain the horse sector's Social Licence to Operate.

Abstract - Tom Reilly

Talking The TAWWG

Tom is speaking about the Thoroughbred Aftercare Welfare Working Group (TAWWG), an independent panel set up by Thoroughbred Breeders Australia. The TAWWG published their 140 page report in late 2021, with 46 recommendations on how to improve the welfare of horses in breeding, racing and once they leave the thoroughbred industry.

Abstract - Cristina Wilkins

Paris 2024 ... A 'Games Changer' for Sport Horse Welfare?

Horses have competed in the Olympics since 1912, but their future participation is by no means guaranteed. Under the leadership of the International Equestrian Federation (FEI), equestrian sports are under pressure to demonstrate to the International Olympic Committee (IOC) that equestrianism meets the principles of Olympism. To achieve this, horse sports must successfully argue their universality, integrity and fairness, gender equality, popularity, environmental sustainability and youth development. While each of these qualities deserves to be debated in great detail, it is reasonable to say that fairness – particularly the question of whether participation in the sport is inherently harmful to the welfare of horses – has become an Olympic problem of the highest priority. This was largely the result of several incidents and accidents that marred the Tokyo 2021 Games, when for the first time and because of the combination of Covid-19 lockdowns and 21st century technologies, the equestrian events were live streamed in their entirety and all around the world. The additional visibility, which was welcomed by fans proved to be a double-edged sword; there were many times when both organisers and equestrians might have wished their sport had received less coverage. We learned that one eventing horse was euthanased as a result of a hard landing, and we watched on as a horse was punched by the team coach for refusing to jump, and another was allowed to finish the show jumping round despite profuse nasal bleeding, his crimson nostrils and blood-spluttered chest contrasting sharply against his light grey coat. These incidents, added to other displays of questionable riding skill or preparation, triggered very strong reactions from the media and spectators, with a section of the population asking for a ban of all equestrian events from future Olympic Games. In an unprecedented pre-emptive intervention aimed at protecting the country’s reputation, the French National Assembly (the lower house of the French Parliament) commissioned and published a 72-page report highlighting what they called, “shortcomings in the current regulations”. The list of issues and depth of analysis is comprehensive and includes 46 recommendations for revising specific rules. Will Paris 2024 be the ‘Games’ changer for equine welfare or will horse sports lose their Olympic licence to operate and be absent from the Brisbane 2032 Games? The stakes are high and, in this presentation, I will analyse the challenges ahead and discuss the opportunities to leverage the tension of this historic moment to maximise progress on horse welfare outcomes beyond the boundaries of the Olympic disciplines

Abstract - Andrew McLean

Ethical training - what does it look like?

Over the last few decades, the term ‘social license to operate’ emerged as a result of the decreasing public legitimacy of mining activities from the standpoint of environmental sustainability. To remain in business, the mining industry has had to work harder for public acceptance. A parallel spotlight is now on the use of animals in sport, and in particular the use of horses. Like mining, the horse industry must now work harder for public acceptance of practices.

Social license prescribes that all animal industries are subject to the same rising community expectations of welfare and the inevitable reassessment of practices. In response, there is a pervasive belief in the horse industry that the solution is to convince and educate the public about the sanctity and worthiness of human-equine partnerships and then ‘social license to operate’ will be restored. What is less understood is that social license is the trust owed to the public and must be earned.

As we look toward our future with horses, sustainability implies that horse management, training and horse sports need to rethink an equine-centric future: welfare from the horse’s perspective. The advent of equitation science and the International Society for Equitation Science have been integral in the burgeoning research in horse welfare including the Five Domains Model of Animal Welfare’s legacy in the notion of a ‘worthwhile life’ for animals.

This presentation illuminates an equine-centric blueprint and paints a futuristic ethical framework for horse training. Approximating humane as well as efficient locomotory control of the horse in-hand and under-saddle requires human education in the use of associative learning, nonassociative learning and reinforcement strategies. However, from an optimal welfare perspective, these components are not enough. Unless training strategies take into account the animal’s current emotional states, sustainability is threatened and indeed learning can be inhibited.

This presentation journeys through the ways in which trainers can optimise mental affect through an understanding of the complex dynamics of arousal, the emerging implications of attachment theory and the adoption of equine-centric management practices. Optimal training is therefore not only about the training regimen itself but implicitly requires knowledge derived from an understanding of the horse’s telos. These insights provide a universal framework for future horse training and provides the best prospects for a worthwhile life for the horse in human-horse interactions and ultimately sustainability of horse training.