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Equestrianism's Social Licence to Operate: Assumptions, Reality, and the Future

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Abstract:

Horse sports and equestrian activities are high risk to the horses and people undertaking them. Societal views on using animals for human entertainment are changing and there is increased debate on how animal welfare is safeguarded. Traditional management systems that reduce opportunities for expression of normal behaviour and high levels of disease and injury in horses interacting with humans have increased public scrutiny on the use of horses by humans, resulting in equestrianism's social license to operate (SLO) being questioned. A SLO is a virtual license from society to engage in an activity; without this the future of equestrianism is under threat. This review explores what constitutes a SLO and considers how stakeholders in the equestrian sector could work together to generate an effective SLO to ensure horse have a good life in all aspects of the relationship with humans.

Key words: horse; horse owner; duty of care; ethical equitation; welfare; equine quality of life

Key points:

1. There is increasing public scrutiny of horse sports and equestrian activities, and how humans safeguard equine welfare within these.
2. A social license (SLO) to operate is a virtual license given to an industry, sector or sport that permits them to engage in their activities.
3. The high-risk nature of horse sports has led to the public questioning equestrianism's SLO.
4. To maintain a SLO, equestrians need to promote practices which give horses a good life, and which are evidence-based and transparently communicated to the public to give them trust

that the equestrian industry is legitimate and credible in its approach to managing horse-human interactions.

5. Increased research to generate the evidence to underpin practice and effective communication strategies to ensure dissemination and uptake by all levels of stakeholder are needed to support the development of equestrianism's SLO.

Introduction

Equestrianism is popular worldwide, with millions of horses and riders participating in competitive horse sports and non-competitive leisure riding (Williams and Tabor, 2017). Horse sports and related activities contribute substantially to many global economies including the United Kingdom (UK), where the equestrian sector was reported to have contributed £4.7 billion to the economy in 2019 (BETA, 2019). BETA report that approximately 3 million people regularly ride in the UK, with 374,000 horse owning households. Yet despite the continuing popularity of horse riding and horse sports, the high-risk nature of some equestrian activities, combined with the potential for them to cause injury or fatalities to the horses and people participating in them, plus the increased scrutiny of equine management and training, are resulting in increasing public scrutiny (Campbell, 2021; Douglas et al 2022; Wolframm et al, 2023). Non-equine stakeholders are questioning humans' right to use horses for leisure and recreational purposes, while equine stakeholders often query if traditional training and management practices are ethical and necessary (Brown et al., 2023; Douglas et al 2022; Williams and Marlin, 2020). This debate has evolved and the question of how equestrianism demonstrates it has a social license to operate (SLO) in the modern era is now commonplace across all sectors of the equestrian industry. This review will reflect on what it means to have a social license to operate as a concept. It will also consider the status of equestrianism's SLO and what this means for different stakeholders in the equine sector. Finally, the future development of horse sports and SLO will be discussed.

What is a Social Licence?

The concept of a social licence arose to showcase societal acceptance of an industry, organisation, or sport. The first documented SLO discussions arose in resource-based industries, specifically mining, in the late 1990's to showcase their legitimacy to users and consumers (Douglas et al., 2020; Gehman et al., 2017). The development and implementation of an SLO in mining aimed to protect the health and safety of workers, alongside protecting the communities and environments affected by mining activities, as industry practice at that time was deemed to be causing environmental damage or to be unethical (Duncan et al., 2018).

In essence, breaking down the definitions of each component within SLO gives a clear indication for what a social licence to operate is (Box 1). Most social licences comprise four key contexts that are integrated into development: legitimacy, trust (procedural), transparency and communication, underpinned by a transparent approach to practice and effective communication strategies (Duncan et al., 2018). It is also important to understand that a social licence is not an 'all or nothing' or a static 'complete it once and it is in place forever' concept (Douglas et al., 2022; Duncan et al., 2018). Public acceptance of activities is likely to vary on an individual level and may sit at any point on a continuum, where an individual person has complete trust in the credibility of an area: psychological identification (perhaps an established equestrian competitor). Or sit at the opposite end of the scale where individuals reject the legitimacy of an activity completely; this perspective would represent the view of Animal Aid, for example, who are universally opposed to horse-racing (Figure 1) (Williams and Marlin, 2020; Prno and Solcombe, 2012). Individual perception of an acceptable social licence for an area is also likely to evolve with a person's own experiences and education, but will also be influenced by the media and broader societal perspectives (Fiedler, 2019). Therefore, within the public consciousness for specific social license areas, the opinions of different stakeholder communities will vary, with the majority judgement most likely to take precedence.

Box 1: Social, License and Operate definitions (OED, 2023; Duncan et al., 2018; Douglas et al., 2022)

Social: <i>relating to society or its organization</i>

License: *authorize the use, performance, or release of (something)*

Operate: *(person / organisation) control the functioning of / to function properly*
(process / system)

Social license to operate (SLO): *a dynamic and evolving framework for an industry, sector, or sport, that defines the boundaries in which they should operate to protect all stakeholders involved within it, and which they need to obtain and maintain.*

Providing 'the privilege of operating with minimal formalised restrictions'

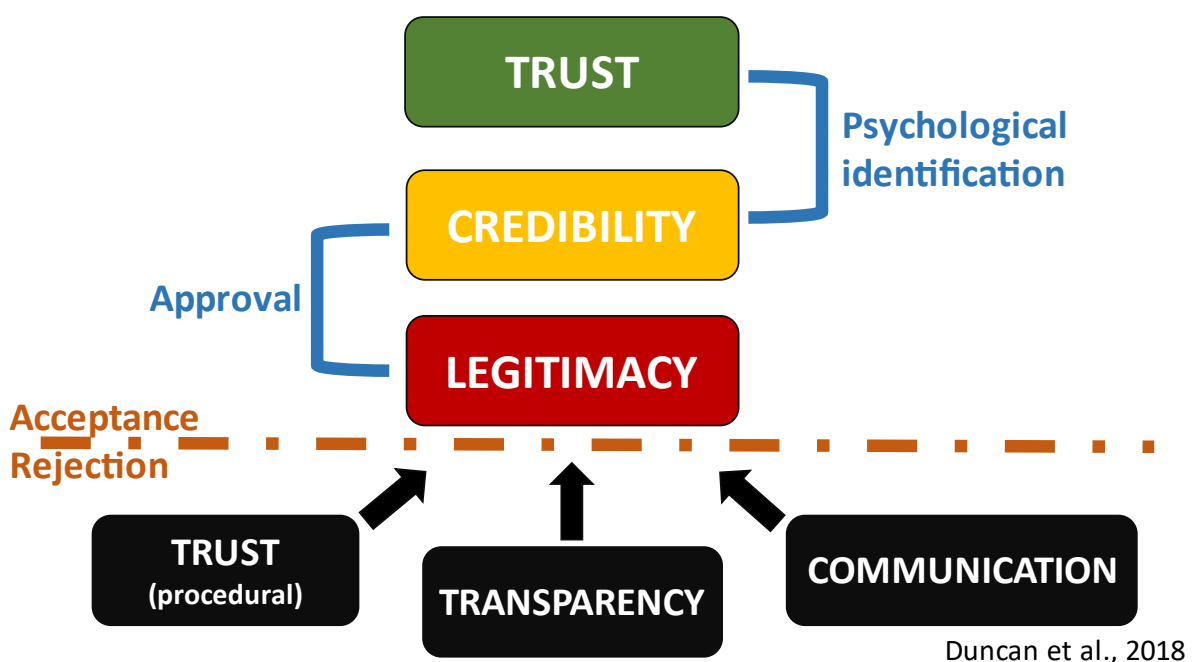


Figure 1: Overview of the principles of a Social License to Operate (SLO)

Social Licence to Operate in Equestrianism

Equestrianism is steeped in history and tradition, which continue to influence how humans interact with horses in the modern era (Williams and Tabor, 2017). While horses arguably retain some element of agency, the ability to act autonomously and control their own lives, given they are sentient and can utilise their size to exert some independent movement, generally, humans are the lead protagonist that control the direction of travel in the horse-human relationship. People therefore have a duty of care to ensure they manage their horses responsibly and should engage in practices which promote

equine health and welfare and should turn to ethical equitation practices that prioritise a horse-centric and welfare promoting approach (Williams and Tabor, 2017; McLean and McGreevy, 2005). Fundamental aspects which would underpin a SLO for equestrianism (Heleski, 2023).

Researchers across equine welfare and equitation science fields have called for horse riders, owners, and trainers to discharge their duty of care and engage in ethical, evidence-informed practices to the horses they interact with for more than two decades. For examples refer to McLean and McGreevy (2005), Randle (2010), Williams and Tabor (2017) and Waran and Randle (2017). The concept of social legitimacy and / or social license for industries involving animals such as horse racing, has been debated from 2010, however a specific equestrian SLO more focused around the welfare of all horses was highlighted by Fiedler and colleagues at the 19th International Society of Equitation Science conference in 2019. During this time, the use of horses particularly in horse-racing, has been the subject of public scrutiny with high profile horse fatalities in races such as the Grand National and the use of the whip fuelling debate. More recently televised incidents of falls and fatigued horses in eventing and inappropriate rider and coach actions in the modern pentathlon during the Tokyo Olympics, have led to questions on how horse welfare is managed across horse sports, highlighting that evaluation of social license broader than horse racing is warranted. Equestrians may or may not agree with broader public perception however whether they do or not, to some extent is a moot point as Fiedler commented (2019): *“The public’s ideas aren’t always grounded in scientific fact. But whether the public is right or wrong, their perceptions of animal welfare in horse sport are what matters”*. Therefore, the equestrian sector finds itself at a critical crossroads with the public questioning if horses should be used for human activities; a SLO framework offers a working solution to safeguard the future of horse sports and recreational equestrianism.

SLO and Equine welfare

The welfare of horses is predominately in the hands of the humans that manage and interact with them (Heleski, 2023; Wolframm et al., 2023; Williams and Tabor, 2017). As a sector we need to provide

opportunities for animals to ‘thrive’, and live ‘a good life’ rather than just survive (Mellor, 216). Applying the enhanced Five Domains framework for animal welfare to assess equine quality of life including evaluation of a horse’s mental state could be a good and positive starting point for equestrians to critique their practice (Figure 2) (Mellor et al., 2020). Many equestrian federations and organisations are starting to embrace this concept and integrated equine welfare as a strategic priority for example, ‘Horses first’ is an International Equestrian Federation (FEI) core value.



Figure 2: Application of Mellor’s Five Domains Model to equine management (adapted from Mellor et al., 2020).

Key policy making organisations such as the British Horse-racing Authority and the FEI have also proactively established independent bodies, the Horse Welfare Board and Equine Ethics and Wellbeing Commission (EEWC), respectively, to lead the way to ensure horses have a good quality of life for their sectors. Recent consultation with just under 28000 equestrians (EEWC, 2022) and the general public (Heleski et al., 2020; Douglas et al., 2022) has consistently identified equine welfare, specifically how a horses’ mental wellbeing, physical condition and health are adequately prioritised, as a critical concern (Box 2).

Box 2: Key areas of public concern in horse racing and horse sports (Heleski et al., 2020; FEI Ethics and Wellbeing Commission Survey, 2022)

Horse racing	Horse sports
Equine welfare Surfaces: injury and fatalities 2-year-old races: age thoroughbreds enter the sport Race day medication Other drugs: doping Whip use Aftercare (former racehorses)	The other 23 hours Tack and equipment Training and riding practices Physical stress and injuries Recognising emotional stress Competitive drive; horse as a number Overworking / not fit to compete

However, the complexity of the horse-human relationship, and the multiple ways human engage with horses recreationally, in sport, and as agricultural and working animals should not be underestimated, and developing a universal SLO framework for equestrianism is not a simple task (Williams and Marlin, 2020). Equestrian sport and practice are steeped in tradition and many existing training and management practices remain based on anecdotal and historic methods rather than scientific evaluation of their effectiveness (McLean and McGreevy, 2010; Williams and Tabor, 2017). Perhaps an effective starting point to embed a SLO, would be to work towards developing an evidence-based approach to legitimatise the management, training and ridden practices we adopt with our horses to demonstrate these are fully justified and their purpose clearly articulates with the outcome desired. Evidence-based practice should be the foundation of practice for individuals working and engaging with horses, to inform their decision-making and enabling them to make a moral judgement as to whether their decisions are ethical and safeguard the horse (Waran and Randle, 2017; Williams and Tabor, 2017). Taking this approach would also underpin the concepts of trust and transparency with the SLO model. Trust must also exist in procedural and regulatory contexts, with key organisations

leading the way across equestrianism but it should equally be evidenced through the duty of care between individuals and the horses in their care (Williams and Marlin, 2020). Once trust is established through an evidence-based approach to decision-making, then transparency should follow as essentially the industry would 'have nothing to hide' and should hopefully promote public acceptance of horse sports and equestrian activities.

Education and research also have a key role to play within the final construct of the SLO model: communication. Despite the need for evidence-based practice there are many areas of equestrianism where research to provide empirical data to inform decision-making is lacking. Alongside this, where research does exist effective communication to the people who would use it in the real-world in a user-friendly format and without judgement of current practice, is sadly often lacking. The veterinary sector has a key role to play in this element of SLO. Previous studies have demonstrated general equestrians have only a moderate insight into their abilities and think they know more than what they really do in practice (Marlin et al., 2018). This level of over-confidence could have serious consequences for horse welfare and emphasises the need for improved education at an individual horse and owner/ rider level, an area which equestrian stakeholders also identified as being much needed (EEWC, 2022). Interestingly, recent work evaluating international equestrians found that veterinarians are considered a key trusted source of information regarding how to manage horse health and welfare (Williams et al., unpublished data). Veterinarians are also well placed to support horse owners to prioritise best practice approaches to managing horse health. They could also help educate owners to be able to recognise that abnormal or conflict behaviours can indicate pain and perhaps underlying health conditions in the horse and warrant further investigation rather than being a training issue (Figure 3) (Williams and Tabor, 2017). This position of trust places equine veterinarians and veterinary nurses in a strong position to support their clients by translating emerging research into best practice approaches to manage equine health and welfare, to be a source of unbiased and trusted information and a key gatekeeper for the horse within equestrianism's SLO. Veterinarians also have their own responsibilities within the evolving equestrian SLO. Practices which were considered normal

historically such as pin-firing tendons have all but disappeared, but other areas of contemporary management within horses may not stand up to public scrutiny and may call the veterinary industry's SLO into question (Blea, 2020). For example, can we justify regular use of joint injections and other medications to manage performance in sport horses, ratify the high injury rates in athletic horses or the high incidence of obesity observed in horses, or keeping horses without opportunities for social interaction and free exercise (Figure 4).



Figure 3: Conflict behaviours such as bucking can indicate pain and perhaps underlying health conditions in the horse.



Figure 4: Strip grazing for individual horses is a common management strategy observed on livery yards to prevent injury, which limits social interaction between horses.

Equestrian SLO: The future

The increased scrutiny of human interaction, management, use and care of horses as equestrianism continues to develop its SLO requires stakeholders across the sector to reimagine measures of success in horse sports, and ensure equine welfare, health and longevity take equal precedence with performance metrics. Douglas et al. (2022) advocate that equestrian culture would benefit from a shift in perception, where stakeholders first ask, “Should I?” before they ask, “Can I?” (Campbell, 2019). This approach is critical and needs to be actively embraced by all equestrian stakeholders if SLO is to be believed by the public (Heleski, 2023). This perspective was echoed by the respondents of the EEWC survey (2022) who indicated that they believed that horses will be involved in sport in the future but only with modifications to ensure their welfare is improved.

The FEI’s EEWC outline their vision for the future across their 24 recommendations: A ‘Good life for horses’ underpinned by a horse-centric approach which has its foundations in ethical and evidence-

based equestrianism embedded in an infrastructure that establishes a trusted and pro-active culture of accountability, responsibility, and transparency (EEWC, 2023). How this is achieved requires the horse industry to come together and unite behind a common goal: placing the horse first. Key enablers are needed to support this vision including increased research to generate evidence to inform practice and regulation across the sector, increased education for all levels of stakeholders to inform decision-making to promote a good life for horses, and to enable accurate welfare assessment, and an informed lead from policy makers and regulatory bodies to act as an advocate for the horse across competitive horse sports (Williams et al., unpublished data; EEWC, 2022; Douglas et al., 2022).

While education and science could prove important enablers to move forward SLO in horse sports, several potential inhibitors to establishing a credible and trusted SLO also exist. Social media offers a lens on all aspects of the equestrian industry: the good, the bad and the ugly, with a picture or video having the potential to reach incredibly large public audiences. Unfortunately, 'the bad' and 'the ugly' often generate more newsworthy stories and gain more traction with the media, translating to increased public attention compared to 'the good'. As an industry and individual equestrian stakeholders, we need to showcase 'the good' via effective communication, education and engagement with evidence-informed practice and ethical approaches to horse management and training. We need to proactively challenge poor practice, in a non-judgemental and supportive way, remembering that a substantial proportion of equine welfare issues reported are associated with neglect due to owner or rider ignorance rather than malicious intent (Hemsworth et al., 2015). Where it is clear no evidence base exists to determine if a piece of tack, training or clinical approach, or management practice is beneficial to the horse, then there should be targeted mechanisms and support from equestrian policy makers and governing bodies to support research to generate this. There is a clear need for increased transparency to showcase the good highlighting the incredible bonds that exist between people and horses, and the good practice which already exists, while challenging the bad and myth busting the ugly.

We should also recognise that words have power and the language used within debate can evoke strong emotions and influence perception of SLO. The whip debate is a good example of this. A whip is defined as a noun as ... a strip of leather or length of cord fastened to a handle, used for flogging or beating a person or for urging on an animal, and as a verb, whipping is ... beating (a person or animal) with a whip or similar instrument, especially as a punishment or to urge them on (OED, 2023). Despite a persistent reduction in whip offences in UK horse racing since 2010 and the introduction of padded whips with the ability to measure their use and force, the use of whips remains a key welfare issue in racing. Little empirical evidence exists for how whips are used outside of racing despite this being widespread across all ages of equestrians and disciplines. Like with many training aids and practices, understanding how horses learn and (actually) react to the cues and signals we give them is critical to ensure an ethical approach to horse training and management occurs. A large-scale survey of 3463 horse riders evaluating whip use identified that generally equestrians owned at least one whip but had poor understanding of learning theory and how this translated to effective use of the whip as an ethical aid; riders who did not use a whip felt using one reflected a deficit in basic horse training (Williams et al., 2019.).

This review has focused on the horse and acceptance of the use of horses for sport and other equestrian activities, however it should not be forgotten that a SLO incorporates broader concepts than this, as observed in other sectors (Douglas et al., 2022). While equine welfare is a pertinent focus at this juncture, the treatment of the people involved in equestrianism and the impact of equestrian activities on the environment also need to be considered moving forwards. There are analogous issues such as risk of injury and poor mental wellbeing across the horses and people involved in the equestrian sector (Davies et al., 2021; Hitchens et al., 2019). Changing behaviour to promote ethical and evidence-informed practices across equestrianism to align with SLO, will only occur if the people involved with horses engage with them. An increased understanding of the role of the human within the horse-human relationship to improve knowledge of how human behaviour influences equestrian practice and informs rider / owner decision making is needed to promote future engagement with

education strategies to underpin an evolving SLO (Furtado et al., 2021). It is also essential that future research continues to further develop the existing evidence-base to fortify equestrianism's SLO (Williams and Marlin, 2020).

The sustainability of routine practice in the equestrian sector such as flying horses around the world for competition and breeding, how equine waste is managed effectively and the carbon footprint of horse ownership are areas which are already being questioned (West and Malalana, 2020). Again, veterinarians potentially occupy a unique position to help mitigate climate change and other environmental impacts of interaction between humans and horses (Mair et al., 2021). A recent survey of veterinary practices highlighted that the majority of respondents (77%) considered sustainability issues to be extremely or very important, but in contrast only 13% felt knowledgeable or well-informed about practical ways they could promote sustainability in equine veterinary practice (Mair et al., 2021). Further work to support embedding an evidence-based and sustainable approach to equestrian practice will be needed and form a key part of the sector's evolving SLO.

Conclusion

A SLO is a virtual license from society to engage in an activity; without this the future of equestrianism is under threat. It is essential to secure the future of horse sports and wider equestrian activities that everyone involved within the equestrian sector actively embraces and proactively engages with social license. For equestrian practice to operate legitimately then the management, training and ridden practices adopted with horses should be able to be fully justified and their purpose clearly articulated. This should occur in a transparent fashion without prejudice and without adopting a defensive stance, to showcase to the public how the physical and psychological needs of the horse are managed to provide horses with a good life.

References

Blea, J.A., 2020. Responsible use of medication in performance horses/racehorses. *In Proc Am Assoc Equine Pract.* 2020; 66:379-82.

Brown, B., Cardwell, J.M., Verheyen, K.L., Campbell, M.L. Testing and Refining the Ethical Framework for the Use of Horses in Sport. *Animals.* 2023;13(11):1821.

British Equestrian Trade Association. National equestrian survey 2019. Available at: www.beta-uk.org/pages/industry-information/market-information.php

Campbell, M.L., An ethical framework for the use of horses in competitive sport: Theory and function. *Animals.* 2021;11(6):1725.

Campbell, M.L.H. *Animals, Ethics and Us*; 5m Publishing: Sheffield, UK, 2019:69–97.

Davies, E., McConn-Palfreyman, W., Williams, J.M., Lovell, G.P. A narrative review of the risk factors and psychological consequences of injury in horseracing stable staff. *Comp Exer Physiol.* 2021; 17(4):303-317.

Douglas, J., Owers, R., Campbell, M.L., Social licence to operate: what can equestrian sports learn from other industries? *Animals.* 2022;12(15):1987.

Duncan, E., Graham, R., McManus, P. 'No one has even seen... smelt... or sensed a social licence': Animal geographies and social licence to operate. *Geoforum.* 2018;96:318-327.

Dunning, D., 2005. *Self-insight: Roadblocks and Detours on the Path to Knowing Thyself.* New York: Psychology Press: 14–15.

Equine Ethics and Wellbeing Commission, International Equestrian Federation, Equestrian Stakeholder Survey, 2022: available here:

<https://equinewellbeing.fei.org/assets/documents/Results%20of%20Equestrian%20Survey%20%E2%80%93%20Equine%20Ethics%20and%20Wellbeing%20Commission%20Report%202022.pdf>

Equine Ethics and Wellbeing Commission, International Equestrian Federation, 24 Recommendations, 2023: available here:

<https://equinewellbeing.fei.org/assets/documents/EEWB%2024%20Draft%20Recommendations.pdf>

Fiedler, J., Thomas, M. and Ames, K., 2019, August. Informing a social license to operate communication framework: Attitudes to sport horse welfare. In Proceedings of the 15th International Society of Equitation Science Conference, Guelph, ON, Canada (pp. 19-21).

Furtado, T., Preshaw, L., Hockenhull, J., Wathan, J., Douglas, J., Horseman, S., Smith, R., Pollard, D., Pinchbeck, G., Rogers, J., Hall, C. How happy are equine athletes? Stakeholder perceptions of equine welfare issues associated with equestrian sport. *Animals*. 2021;11(11):3228.

Gehman, J., Lefsrud, L.M., Fast, S. Social license to operate: Legitimacy by another name? *Cdn. Public Adm. J.* 2017;60:293–317.

Hemsworth, L.M., Jongman, E., Coleman, G.J., 2015. Recreational horse welfare: The relationships between recreational horse owner attributes and recreational horse welfare. *App Anim Behav Sci.* 2015;165:1-16.

Heleski, C.R., Social License to Operate—Why Public Perception Matters for Horse Sport—Some Personal Reflections. *J Eq Vet Sci.* 2023;104266.

Heleski, C., Stowe, C.J., Fiedler, J., Peterson, M.L., Brady, C., Wickens, C., MacLeod, J.N., 2020. Thoroughbred Racehorse Welfare through the Lens of ‘Social License to Operate—With an Emphasis on a US Perspective. *Sustainability.* 2020;12(5):1706.

Hitchens, P.L., Ryan, K., Koch, S.I., Scollay, M.C., Peterson, M.L., A sustainable structure for jockey injury data management for the North American horse racing industry. *Injury.* 2019;50(8):1418-1422.

Mair, T.S., Janska, S., Higham, L.E., 2021. Sustainability in equine veterinary practice: A survey of opinions and practices amongst veterinary teams in the United Kingdom. *Eq Vet Ed.* 2021;33(11):e445-e448.

Marlin, D., Randle, H., Pal, L., Williams, J., 2018, September. Do equestrians have insight into their equine-related knowledge (or lack of knowledge)? In Proceedings of the 14th International Conference. Equitation Science 150 years after Caprilli: theory and practice, the full circle. (p. 66). Pisa University Press.

McGreevy, P.D. and McLean, A., Behavioural problems with the ridden horse. The domestic horse: The origins, development and management of its behaviour. 2005: 196-211.

McLean, A.N., McGreevy, P.D. Ethical equitation: Capping the price horses pay for human glory. *J Vet Behav: Clinl App Res.* 2010;5(4):203-209.

Mellor, D.J., Beausoleil, N.J., Littlewood, K.E., McLean, A.N., McGreevy, P.D., Jones, B., Wilkins, C. The 2020 five domains model: Including human–animal interactions in assessments of animal welfare. *Animals.* 2020;10(10):1870.

Oxford English Dictionary Online. 2023. Available at: <https://www.oed.com/>

Prno, J.; Slocombe, D.S. Exploring the origins of ‘social license to operate’ in the mining sector: Perspectives from governance and sustainability theories. *Resour Policy.* 2012;37:346–357.

Randle, H. Ethical equitation—A sustainable approach. *J Vet Beh: Clin App Res.* 2010;4(5): 167-169.

Waran, N., Randle, H. What we can measure, we can manage: The importance of using robust welfare indicators in Equitation Science. *App Anim Beh Sci.* 2017;190:74-81.

West, E., Malalana, F. Environmental sustainability in the equine veterinary profession. *Eq Vet Ed.* 2020; 32(10):508-510.

Wolframm, I.A., Douglas, J. and Pearson, G. Changing hearts and minds in the equestrian world one behaviour at a time. *Animals,* 2023: 13(4), p.748.

Williams, J.M., Marlin, D. Foreword—Emerging issues in equestrian practice. *Comp Exer Phys.* 2020;16(1):1-4.

Williams, J., Greening, L., Marlin, D., Randle, H. 2019, August. Understanding whip use in riders in sports horse disciplines. In International Society for Equitation Science: 15th International Conference of the International Society for Equitation Science.

Williams, J., Tabor, G. Rider impacts on equitation. *App Anim Beh Sci*. 2017; 190:28-42.

Williams, J. Performance analysis in equestrian sport. *Comp Exer Phys*. 2013;9(2):67-77.

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