

MEDIOLATERAL BALANCE

The same views but a different perspective

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In Greek mythology there was a giant of a man, Procrustes. He was real villain, being both thief and murderer. He would force his victims to lie on a bed. Those for whom the bed would prove too large, he would simply stretch them until they fitted. Whilst those for whom the bed was too short, he would simply lop off any bits which protruded over its edge.

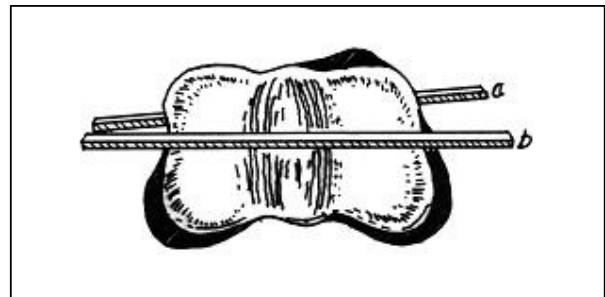
There is a clear and present danger that any of the theories applied to farriery may become procrustean in their nature. The laws and principles, which govern the practice of farriery, should only be considered as guide lines. These laws which we have in daily use will have been drawn from experience, but just as our experience and knowledge widens, then so too the laws which we apply to our daily practices must change.

In this article I like to draw to your attention to some of the evidence which could be used to contradict the T-square theory. The T-square has in the past been supported by a framework of evidence, which has been built around it. As a theory it must be seen to be flawed, however as a tool its use has not been fully explored. I feel it would be worth while at this opportunity to also provide a more closer look at its use as a simple but effective guide, that can help us to understand better the affects that hoof trimming may have upon the equine foot.

In my last article I tried to illustrate the reasoning behind my doubts concerning the T-square theory. Like many farriers I have a concern strong enough to question the findings of others, but I would wish to stress that it is only because the others have voiced their opinions that I am able to come forward with mine.

One of the major sticking points, which has entrenched farriery over this last century, has been the inability to establish what is normal, so that we may recognise that which is desirable. Instead our objectives have been guided by questionable theoretical ideals.

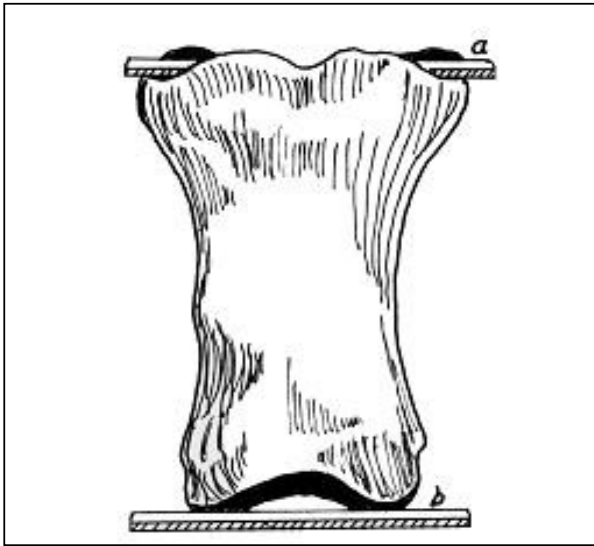
For example, Lungwitz, the author of the classic text "*Horseshoeing*" drafted in 1884, provides us with two views of a left front pastern. The captions, which accompany these sketches, suggest that the asymmetrical articular surfaces are the result of some malformation. I however with hindsight, would suggest that this rather than being the abnormal is quite a normal example of a limb's individual and complex geometric make-up.



(Fig. 1) Left front long pastern viewed from the upper articular surface: a, transverse axis of lower articular surface: b, transverse axis of the upper articular surface.

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(Fig. 2) Left front long pastern showing compression shortening of outer half: a, transverse axis of upper articulation; b, transverse axis of coronary joint, not parallel to upper axis.

Perhaps James R. Rooney, D.V.M. would agree with me, for in his book *"The Mechanics of the Horse"*, written almost one hundred years later in 1981, he noted that "as the joints flex and extend...they also impose a rotation or spin around the long axes of the bones.... The joints are constructed in this manner and must move in this manner causing the bones to spin around their long axes"

In my opinion the T-square has found success almost by accident rather than by design. When in use, the T-square provides the user with certain information, which he can then act upon. It consistently suggests to the user the need to trim a greater amount off the lateral side of the hoof. Although the results have been both positive and encouraging, disappointingly there has been no convincing explanation about how this procedure works.

My own reasoning is based upon the geometrics of the limb and the influence caused by the length of the cannon bone during the habits of both posture and movement, culminating in the resultant interaction between the hoof and the ground-surface.

In Fig. 3b, we see the pastern deviates outwards. Where this occurs the lateral side is flared, whilst the medial side is more upright. When the hoof lands the initial contact is focused upon the lateral side, causing it to flare out even more. The secondary contact (compression) is directed towards the medial side. This compression reduces the structure of the horn in such a way, that there is apparently less hoof to trim on the medial side. However the lateral side is not compressed, so during the act of hoof trimming we will need to reduce that side more, paying attention also to any excessive flare. In that way we can restore the hoof to a more level balance.

In Fig. 3c the pastern deviates inwards. When this occurs the medial side is flared, whilst the lateral side is more upright. The use of the T-square in these cases not only suggests to the user to trim more off the lateral side but also highlights just how upright the lateral side can be. Although I don't believe the T-square can possibly provide us with a definitive guide for hoof trimming, its use does help us to visualise hoof and limb conformation. For example its use can help us to establish just how upright or how flared the hoof wall is, and this we can do by comparing the angulations of the hoof wall to the long axis of the cannon. Here the use of the T-square makes this become more apparent. If one side runs parallel or even folds in medially to the long axis of the cannon bone, whilst the other side is flared or deviates sharply from the long axis, then as new growth occurs it is likely to worsen. The resultant action being, for those horses which are shod, that the shoes are automatically pulled towards the flared side

Now all this may sound familiar and many of you will agree that Fig. 3a is considered to be the ideal hoof conformation, but we as farriers all know, that the vast majority of hooves that we see daily, are better represented by the other two illustrations. Interestingly, it is via the accounts of other authors, that we are all fully aware that these hoof types, are not expected to achieve flat footfall! So what is normal? What is acceptable? Are your views different?

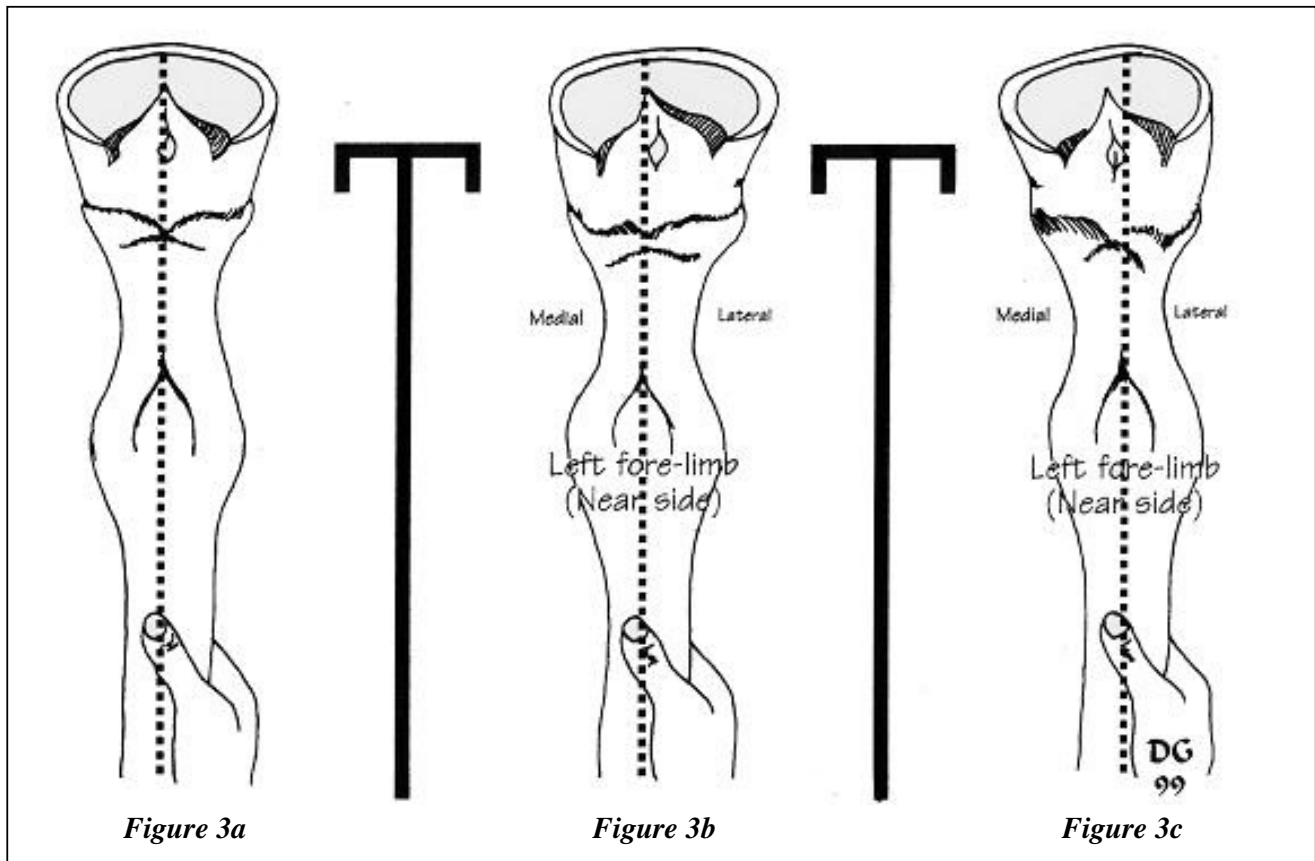


Fig. 3 Illustrated here are three very different left front limbs, as seen when being held for assessment, prior to hoof trimming.

Fig. 3a The type of limb and hoof configuration commonly considered both normal and ideal.

Fig. 3b A left-fore limb with the pastern turning outwards, from the long axis of the cannon bone (lateral deviation).

Fig. 3c A left-fore limb with the pastern turning inwards, from the long axis of the cannon bone (medial deviation).

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