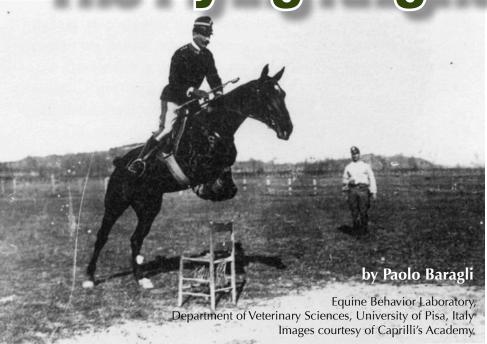
# The Flying Knight



In an age when equitation was ruled by strict military tradition, Federico Caprilli's revolutionary techniques transformed the way in which horses and riders were trained. In this article, Paolo Baragli explores how reading Caprilli's teachings within the context of Learning Theory could help us apply his work to modern equitation.

Captain Federico Caprilli was an Italian cavalry officer that in the late 19th Century introduced the concept of the 'forward seat', a technique used since by all jump riders because it allows horses to remain in balance and have complete freedom of action.

Born in Livorno in 1868 from a middleclass family, Federico Caprilli entered the Military College in Florence at the age of 14 without having any horse riding experience.

In 1888 he left the Royal Military Academy with a lieutenant rank and a report which stated his riding ability as "poor". Despite this, military training awakened in him a passion for equitation, and when assigned to the Cavalry Regiment 'Royal Piemonte' he spent time studying the movements of the horse at liberty and of the rider in the saddle.

During his time, the main concern for the cavalry was to quickly turn the recruits, who often had no experience in equitation, into riders that could handle their horses along cross country routes, full of hills and natural obstacles. By carefully studying the horse, Caprilli understood that the best way to get good results in a short time, was to teach recruits to ride in a way which favoured as much as possible the movements of the horse.

Throughout Europe, cavalry recruits followed a strict training period in the arena, during which the horse had to be submissive to the will of the rider. It was thought for example, that during the jump, the rider needed to "help" the horse by tilting the torso back and pulling the reins in an attempt to make the horse land with hind legs first. This was thought to relieve the horse's fragile forelegs on landing.

The study, the passion and the hunger for knowledge led Caprilli to develop a new and revolutionary way of riding - a simple but effective concept, according to which, in order to make faster and more efficient the training of the recruits, it was necessary to teach them to take care of their horses and teach them to interfere as little as possible with their natural movement and balance.

Under Caprilli, recruits were for the first time required to ride out along country routes straight away, instead of spending weeks indoors performing exercises that were unnecessary for the needs of the cavalry regiments of the time

Caprilli is most famously known for having revolutionized the jumping seat and introduced the concept of "natural equitation" which today is recognized as 'the revolution in modern equitation'.

"[the rider] studies how to render less disgusting its actions to the horse, and how not to bother it". (Federico Caprilli)

It would take several years for the teachings of the Flying Knight (as he was nicknamed by his contemporaries) to be accepted in the conservative environment of the Military Cavalry, but the results could not be ignored, and led Caprilli to become chief riding instructor of the Italian Cavalry.

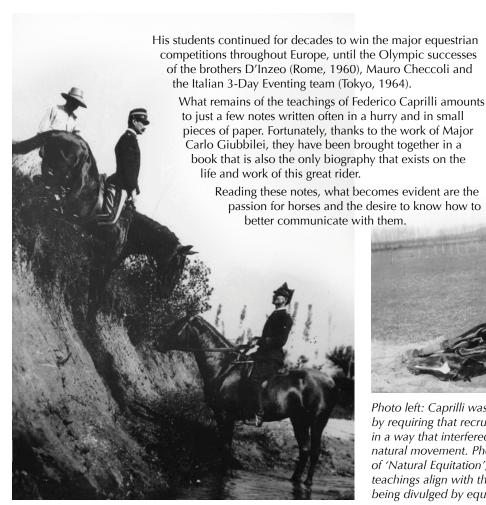
Proof that Caprilli's concepts were correct was demonstrated with many international competition victories achieved both by himself and his pupils, competitions which at the time were reserved almost exclusively to the military riders. A good example was when at the Turin Horse Show in 1902, the Flying Knight beat the height jumping world record by clearing a jump over 2 metres high, a feat that had never been achieved until that time (see image on page 27).

Caprilli died following a trivial fall from a horse in December 1907. As often happens to great men, his death is shrouded in mystery and many ask how it was possible for such a fine horseman to have fallen in the manner described by the witnesses. We'll never know, but what we are sure about is the legacy he has left us.

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The concept of lightening the seat and "giving" the reins to the horse while jumping revolutionised equitation. Caprilli was the fist to realise the horse needed freedom to deal with the obstacle and maintain its natural balance (in the photo Caprilli is riding Grifalco).



It requires that teachers know and do not just believe they know. (Federico Caprilli)

Photo left: Caprilli was first to break cavalry training traditions by requiring that recruits learn to ride outdoors and balance in a way that interfered as little as possible with the horse's natural movement. Photo above: Caprilli is known as the father of 'Natural Equitation', he studied the horse and many of his teachings align with the evidence-based learning theory principles being divulged by equitation scientists today.

### **International Society for Equitation Science (ISES) First Principles of Horse Training**

(a more detailed description can be found on www.equitationscience.com)

#### 1. Understand and use learning theory appropriately

Learning theory explains positive and negative reinforcement and how they work in establishing habitual responses to light, clear signals. It is critical in the training context that the horse's responses are correctly reinforced and that the animal is not subjected to continuous or relentless pressure. Prompt and correct reinforcement makes it more likely that the horse will respond in the same way in future. Learning theory explains how classical conditioning and habituation can be correctly used in horse-training.

#### 2. To avoid confusion, train signals that are easy to discriminate

There are many responses required in horse-training systems but only a limited number of areas on the horse's body to which unique signals can be delivered. From the horse's viewpoint, overlapping signal sites can be very confusing, so it is essential that signals are applied consistently in areas that are as isolated and separate from one another as possible.

## 3. Train and shape responses one-at-a-time (again, to avoid confusion)

It is a prerequisite for effective learning that responses are trained one-at-a-time. To do this, each response must be broken down into its smallest possible components and then put together in a process called "shaping".

#### 4. Train only one response per signal

To avoid confusing the horse, it is essential that each signal elicits just one response. (However, there is no problem with a particular response being elicited by more than one signal.) Sometimes a response may be complex and consist of several trained elements. These should be shaped (or built up) progressively.

## 5. For a habit to form effectively, a learned response must be an exact copy of the ones before

For clarity, a complete sequence of responses must be offered by the horse within a consistent structure (e.g., transitions should be made within a defined number of footfalls). Habit formation applies to transitions in which the number of footfalls must be the same for each transition and this must be learned.

#### 6. Train persistence of responses (self-carriage)

It is a fundamental characteristic of ethical training systems that, once each response is elicited, the animal should maintain the behaviour. The horse should not be subjected to continuing signals from leg (spur) or rein pressure.

## 7. Avoid and dissociate flight responses (because they resist extinction and trigger fear problems)

When animals experience fear, all characteristics of the environment at the time (including any humans present) may become associated with the fear. It is well-known that fear responses do not fade as other responses do and that fearful animals tend not to trial new learned responses. It is essential to avoid causing fear during training.

#### 8. Benchmark relaxation (to ensure the absence of conflict)

Relaxation during training must be a top priority, so when conflict behaviours are observed in the horse, we must carefully examine and modify our training methods so that these behaviours are minimised and ultimately avoided. To recognise the importance of calmness in enabling effective learning and ethical training, any restraining equipment, such as nosebands, should be loose enough to allow conflict behaviours to be recognised and dealt with as they emerge.



Federico Caprilli rides Melopo to clear the world record height of 2.08 m in the Turin Show of 1902 a feat that had never been achieved to date.

A more accurate reading of the work interestingly shows that the teachings of Federico Caprilli also reflected the principles of Learning Theory now being divulged by the academic branch of Equitation Science.

While he may not have been aware of their underlying scientific meaning, some of these excerpts easily align with the Training Principles of the International Society for Equitation Science (ISES), (see text box on left).

For example, Caprilli's text expressed that "when the horse is fearful of the rider's actions it constantly looks for a chance to shun the rider's restless pressure focusing primarily on evading constriction rather than performing as requested".

This seems to reflect the 7th principle of training: 'Avoid and dissociate flight responses' (because it is known that fear responses do not fade as other responses do, and that fearful animals tend not to trial and therefore learn, new responses).

Another example is Caprilli's statement:

"the first rule of good horsemanship is to reduce, simplify and, if possible, eliminate the rider's intervention. Using your reins to make the horse turn and stop and your legs to make him move forwards is enough! If the rider makes these moves at the right moment, remaining passive afterwards, and doesn't disturb the horse while it is responding, he will achieve wonderful results and will perform well". This could well relate to principles n. 2 (train easy to discriminate signals, to avoid confusion) and 6 (once each response is elicited, the animal should maintain the behaviour and should not be subjected to continuing signals from leg or rein pressure).

Furthermore his idea that "a rider who is able to release at all times will pull at the right moment and in the correct manner" seems to reflect the 1st principle of training: Release the pressure immediately when the horse responds (so that horse's responses are correctly reinforced and that the horse is free of continuous or relentless pressure). In many ways, Caprilli appears to have correctly applied

The legacy of the Flying Knight is kept alive today by the Caprilli's Academy and the website: www.accademiafederigocaprilli.it.



This historic photo became symbolic of the golden age of the School of Pinerolo, when military officers from around the world attended courses under Caprilli to learn his revolutionary training system.



ABOUT THE AUTHOR: Dr. Paolo Baragli degree in Veterinary Medicine with a PhD in Equine Physiology. He is lecturer and researcher at Department of Veterinary Sciences (University of Pisa, Italy). He has studied the ethology and physiology of the horse for many years, with particular emphasis on understanding neuro-endocrine and behavioral mechanisms in response to exercise-induced stress as well as the human-

horse relationship. Regarding this relationship, Dr. Baragli's research has focused on studying and understanding possible cognitive ways of interaction between humans and horses. In particular, it underlines the need for improved knowledge of horse behavior to better guide humans in the relations with these animals, expecially regarding the application of Learning Theory in the horse training. He is member of the International Society for Equitation Science and is author of many reports presented at conferences as well as publications in international journals.

