

## Analysis of Human-Horse-Relation

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The relation between humans and animals is one of the most famous factors for animal welfare in modern housekeeping systems.

Words like intuition and empathy in exposure to the horse are difficult to describe, to measure or to teach. In German speaking countries there is the sentence: a good rider knows what the horse will do before it can do it; a bad rider only reacts to what the horse has done.

By using the monitoring system smardwatch® in connection with chronobiological regulation diagnostics it becomes possible to get insight in the interaction between human and horse. The smardwatch® enables measuring of so called psycho-physiological parameters like skin resistance, skin potential, electromyogram and skin temperature, measured 10 times per second; it also registers behavior information as 3D-acceleration and -position and over this environment information like temperature, noise and brightness.

Cutting hooves, cleaning and riding a horse are monitored for example. The data were analyzed under distinct aspects by chronobiological regulation diagnostics developed by Balzer and Hecht (2000). The physical and vegetative activities of the human and the animal were pointed out separately and in their interaction at different levels. Very interesting is the influence of different humans on one horse or the influence of one human on distinct horses. The synchronies or asynchronies in the behavior of different human-horse-pairs could be proved at the level of their vegetative functions. While riding phases of exhaustion of the horse could be shown just as the increasing activity of the rider to compensate this exhaustion.

The method could be a basic approach to develop new training methods which agree with individual rhythms of riders and horses to optimize their achievement. These analyses are not only important for riding, they also give useful directions for daily contact with horses. So it will be possible to detect harmony/disharmony between human and horse for their pairing in order to teach them and to buy or sell a horse, respectively.

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