

Personality and production in dairy cows

Louise Hedlund

MSc project; Applied Ethology and Animal Biology, Linköping University

Supervisor: Hanne Løvlie, IFM Biology, Linköping University

BACKGROUND: Personality is individual differences in behaviour consistent over time and contexts. Variation in personality is predicted to be related to life-history traits such as investment in reproduction. How this translates into relationships between personality and milk production in dairy cows is scarcely investigated and previous studies show contradicting results.

AIM: to investigate the links between personality and milk production in dairy cows

RESULTS: Cows were consistent in behaviour during milking (Fig 1) and in performance of abnormal behaviours (Fig 2). Variation in neophobia and behavioural responses to social separation were more flexible over time. Nevertheless, cow personality showed limited relationship with milk production.

CONCLUSIONS: Behaviours observed in this study are useful when describing personality in cows. However, further studies are needed to fully understand the links to milk production

Louise Hedlund
+46 (0)737693150
louni816@student.liu.se

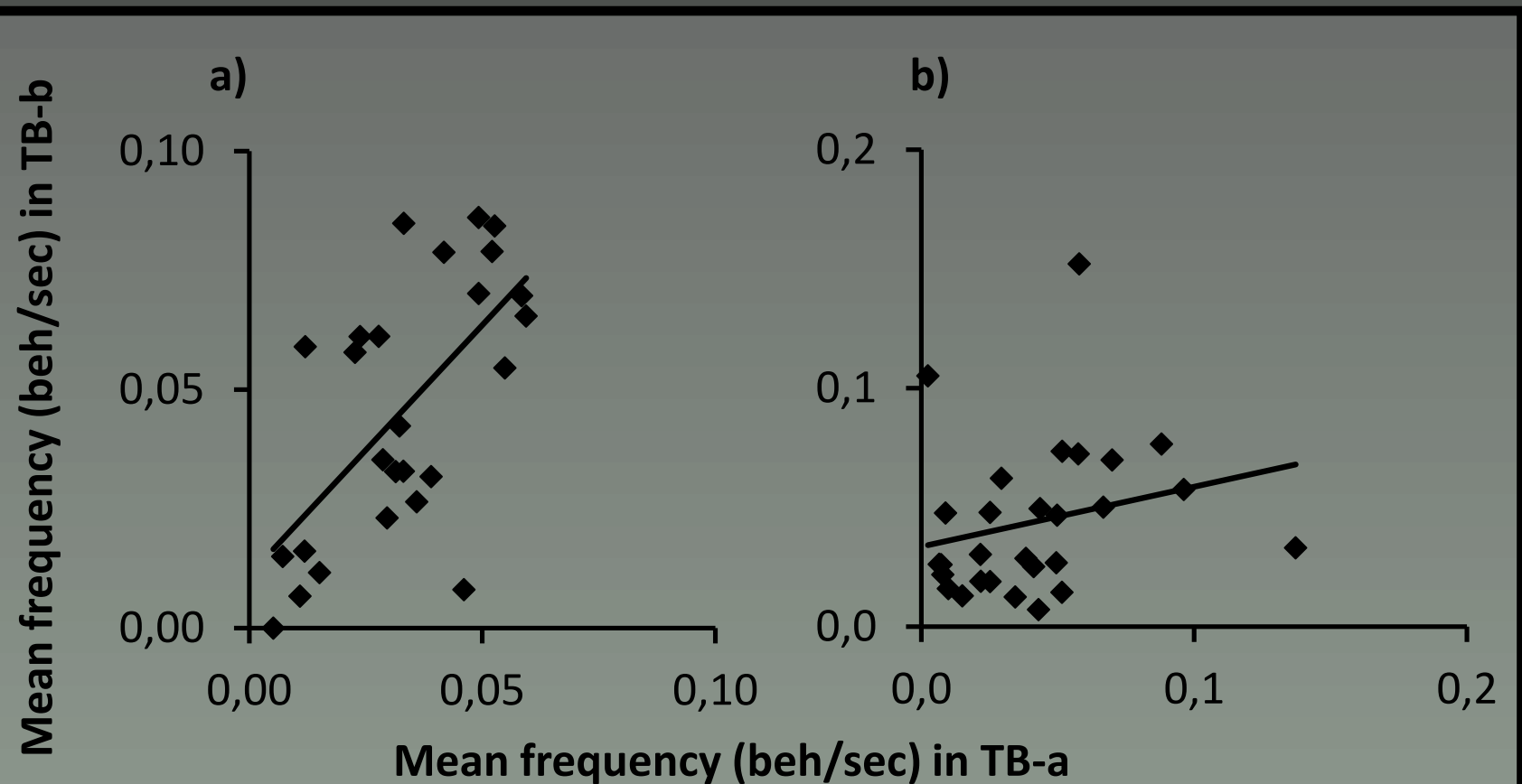


Figure 1 Mean frequency of stepping behaviour in TB-a and TB-b respectively, by a) SRB ($r=0.62$; $p<0.01$; $n=26$) and b) Holstein ($r=0.43$; $p=0.02$; $n=28$) cows

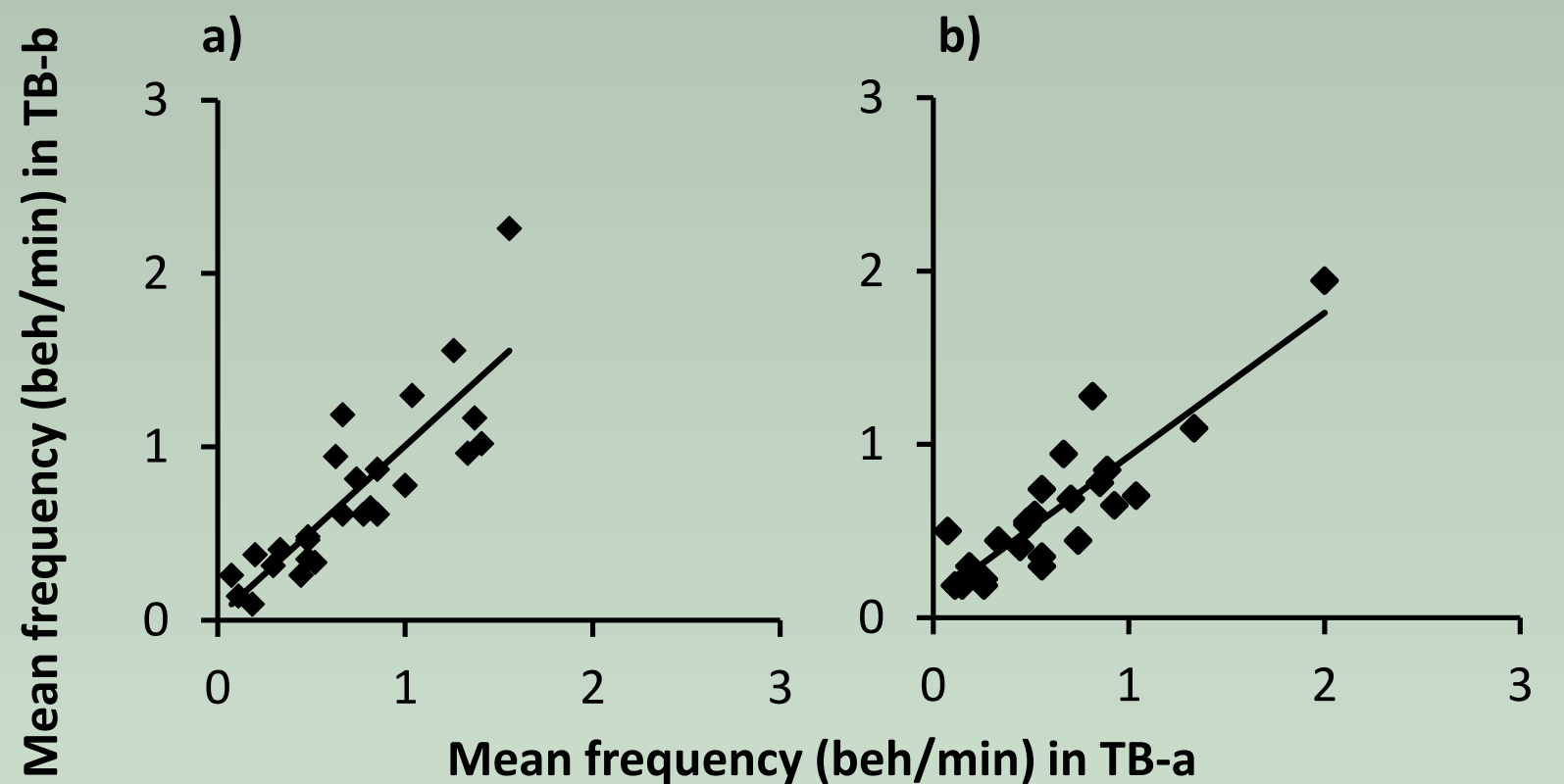


Figure 2 Mean frequency of abnormal behaviours in home pen in TB-a and TB-b respectively, by a) SRB ($r=0.89$; $p<0.01$; $n=26$) and b) Holstein ($r=0.83$; $p<0.01$; $n=27$) cows

METHODS: Three tests were conducted on two breeds of dairy cows (SRB and Holstein): 1) behaviour in milking parlour 2) behavioural reactions to social separation and exposure to novel stimuli, and 3) abnormal behaviours in home pen (TB-a). Tests were repeated on the same individuals in 8 weeks to measure consistency over time (TB-b). Behaviours were correlated to production values from the cow's first, second and third lactation as well as production during the actual test period. Relations were investigated in SPSS with Spearman rank-order correlations.