Abstract 26:

Is the Judgement Bias Task biased?

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Mood depends on one's perception of one's living conditions, resulting from the interaction between one's personality and the hedonic quality of the environment. Animal mood is commonly inferred from individual pessimism because animals in a bad mood are more pessimistic than animals in a good mood. Mood-induced pessimism is assessed using Judgment Bias Tasks (JBTs). However, there are indications that personality influences animal pessimism in JBT, hence complicating the interpretation of JBT results. We aimed to disentangle the effects of personality and housing conditions on pessimism, before investigating consistency in pessimism across housing conditions. We assessed dimensions of personality in 48 heifers using Open-Field, Novel-Object and Runway tests. Personality effects on pessimism in JBT were examined when heifers were housed under reference conditions. Subsequently, heifers were housed under positive or negative conditions, and housing effects on pessimism in JBT were investigated while controlling for personality differences. A Principal Component Analysis revealed three personality traits: Activity, Fearfulness and Sociability. Under reference conditions, inactive/fearful heifers were more pessimistic than inactive/non-fearful heifers ($p=0.032$), questioning the generalizability of JBT across individuals. Housing did not influence cattle pessimism ($p>0.05$), potentially due to an insufficient sensitivity of the JBT or a lack of treatment efficacy. Additionally, pessimism under reference conditions tended to be associated with pessimism under both positive and negative housing conditions ($p=0.057$) – suggesting that individual pessimism in JBT depends on stable characteristics like personality. We conclude that personality-based differences in perception of the JBT set-up may hinder the detection of mood-induced shifts in pessimism.