Your pessimism brings me down, but does your optimism lift me up? Emotional contagion in ravens

Common ravens (*Corvus corax*) demonstrate sophisticated socio-cognitive skills in social interactions like third-party interventions and post-conflict consolation. This raises the possibility that ravens are sensitive to emotions in others. Here we experimentally elicit short-term emotions in ravens and examine its contagious effect on observers. Emotional contagion can be explained by the theoretical idea of the perception-action mechanism, namely perception and action share a common representation in the brain. However, to accurately measure if such contagion takes place it is crucial to develop correct methods to measure emotions in the bird itself in the first place. To answer to this challenge and the main idea, the following set up is designed: sub-adult ravens (n=8) are tested in dyads; one bird, the so-called demonstrator, is exposed to stimulus presentation which elicits either anticipation or frustration; the other bird, the so-called observer, is exposed to the response of the demonstrator only. Before and after each presentation, both birds are exposed to a cognitive bias test. We predict that each stimulus presentation elicits an accordingly emotional response, not only in the demonstrator but also in the observer via emotional contagion. Results from the cognitive bias testing confirm the predictions for the observer, however only partially for the demonstrator.