Negative subjective states, such as pain, are at the core of moral concerns around the proper care of animals, and the scientific assessment of these states is one of the greatest challenges for modern biology. In this presentation, I will review a variety of methods used to assess negative subjective states in animals, and critically evaluate the strength of inferences that can be drawn from these techniques. I will go on to argue that our strongest moral sanctions revolve around suffering, rather than the pain, fear or other states that contribute to this, and thus conclude with a brief summary of some ideas for how we might also be able to create scientific methods specifically designed to assess suffering.