

a = action space: -5, ..., 5

e =emotions vector

 $a_{tn+1} = Math.round(e_{tn+1}[\epsilon] - e_{tn}[\epsilon] * 5)$, where ϵ is a specific emotion.

This equation transfers the variation of emotions into the action space. $[-1..1] \rightarrow [-5...5]$ It means that a bigger variation in the player's emotions will cause a steeper change in difficulty.

At each step of the game, difficulty $d_{tn+1} = d_{tn} + a_{tn}$

