Annexure- A

Movie

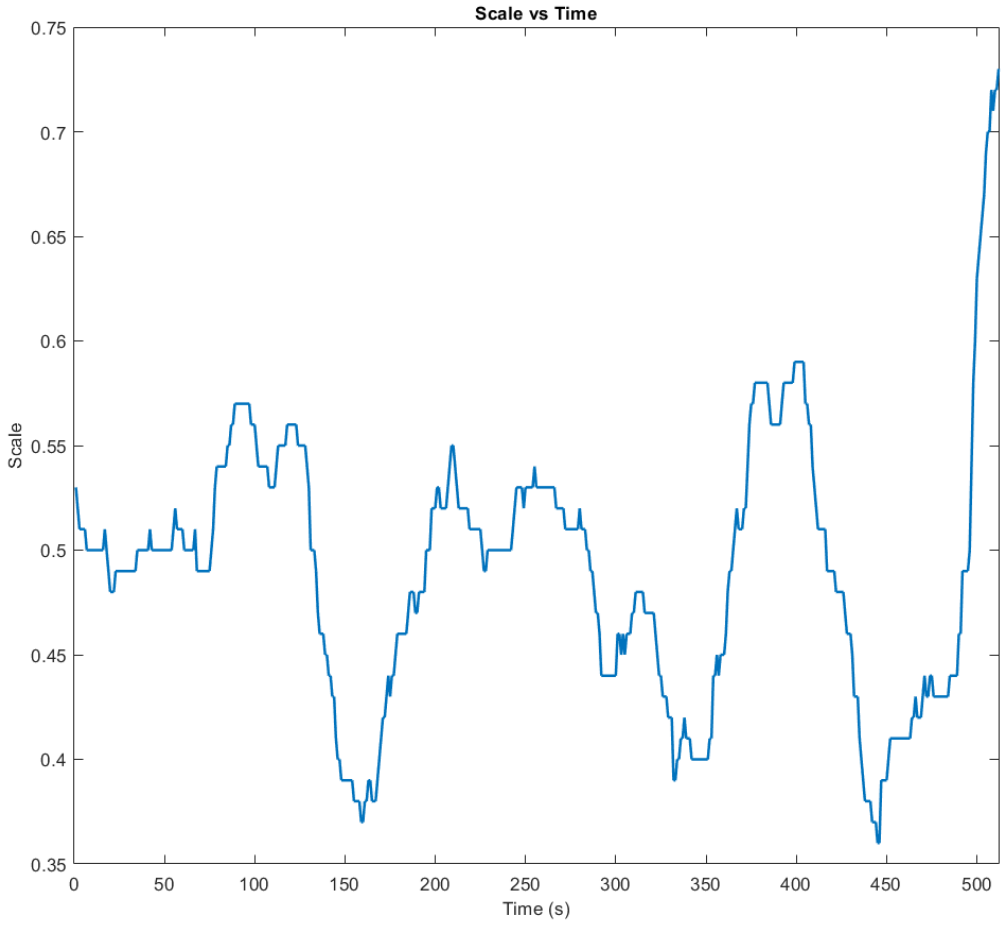
Title**: *These Times***

The film is directed by Ramy El Gabry, starring Khaled Megald, Abdallah Alnahas and Awatef Helmy and is set in Cairo, Egypt. The short 11 minute movie, opens with a scene that shows a young man dressed for office standing in his balcony and sees an old woman being led by a man to a seat facing the waterbody in front of his house. The woman is instructed by her son to wait for him, as he has to go for some work. He gives her a piece of paper saying it has his contact details. The woman is shown sitting on the seat, watching people go by and also talks to a young child who halts at the seat. The man who sees her in the morning, returns from office in the evening and see her still sitting at the same place. He crosses the road and walks over to her. He starts a conversation, and she mentions that she is waiting for her sone to return. She also narrates how she will be seeing her grandson for the first time, as she stays in the village, and shows the man the chain she bought for her grandson and a photograph. Being thirsty she accepts water from the man. He then offers to call her son, to find out the reason for the delay. Initially she hesitates as she does not want to trouble the son and the man too. But then relents and hands over the slip of paper. The man opens the paper and sees that the message written by the son is “whoever finds this woman, please move her to an old age home”. The last scene zooms in as the man’s expressions is understood by the woman and her face reflects acute sorrow.

Link: https://www.youtube.com/watch?v=l9bbUJRv2JI

Plot of the scale participants gave for the movie

Forty independent viewers rated the movie on a continuous semantic differential scale for emotion contagion and the average score was regressed with the voxel timeseries of the left/right Insula, an area critical for emotion processing.



Annexure- B

Technical specifications of the fMRI data collection process

Data was collected from a 3 Tesla Philips fMRI 8-channel Achieva head coil whole-body scanner using gradient echo-planar imaging (EPI) sequence. Functional images were acquired with a repetition time (TR) of 2 seconds, echo time (TE) of 35 milliseconds, and a flip angle of 90 using a weighted echo-planar sequence. Other parameters include acquisition matrix of 64 * 64, slice thickness of 5mm, a gap of 1mm, 30 axial slices in the AC-PC plane, REC voxel MPS of 1.8 X 1.8 X 5 mm, and acquisition voxel MPS of 3.5 x 3.5 x 5.0mm. The stimuli was designed in the E-prime software and projected from outside the scanner room onto a mirror mounted over the head coil. The total scan duration was 25 minutes, with movie clip analysed for this study shown for 8 minutes 45 seconds. For the 3-dimensional T1-weighted structural data the Fast Field Echo (FFE) technique was used with a TR/TE = 8.39ms/3.7ms acquiring 150 slices, flip angle of 8, field of view (FOV) : 250 x 230 and voxel volume of 0.98 x0.98 x1.0 mm. The functional scan acquisition and events in the paradigm were trigger-locked.

Annexure- C

Regions considered

1. **Amygdala (Amygdala)**
2. **Angular (Angular)**
3. **Cingulum_Ant (Anterior Cingulate Cortex - ACC)**
4. **Cingulum_Post (Posterior Cingulate Cortex – PCC)**
5. **Frontal_Inf_Oper (Inferior Opercular Frontal)**
6. **Frontal_Inf_Orb (Inferior Orbital Frontal)**
7. **Frontal_Inf_Tri (Inferior Triangular Frontal)**
8. **Frontal_Med_Orb (Medial Orbital Frontal)**
9. **Frontal_Mid (Middle Frontal)**
10. **Frontal_Mid (Middle Frontal Right)**
11. **Frontal_Sup_Medial (Superior Medial Frontal)**
12. **Frontal_Sup_Orb (Superior Orbital Frontal)**
13. **Fusiform (Fusiform Gyrus)**
14. **Hippocampus (Hippocampus)**
15. **Insula (Insula)**
16. **Occipital_Inf (Inferior Occipital)**
17. **Occipital_Mid (Middle Occipital)**
18. **Occipital_Sup (Superior Occipital)**
19. **ParaHippocampal (Parahippocampus)**
20. **Parietal_Inf (Inferior Parietal)**
21. **Parietal_Sup (Superior Parietal)**
22. **Precuneus (Precuneus)**
23. **SupraMarginal (Supramarginal Gyrus)**
24. **Temporal_Inf (Inferior Temporal)**
25. **Temporal_Sup (Superior Temporal)**
26. **Thalamus (Thalamus)**

The bilateral regions were considered, making it a total of 54 regions in the study.