The Acting Self: using fNIRS to measure an actor’s sense of self during a monologue performance

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RESEARCH QUESTIONS

• Do actors lose their sense of self whilst in character?

• What is the difference in mPFC activity when actors hear their own name vs character name?

• Does an actor’s response to their own name differ when they are acting compared to not acting?

METHODS

PARTICIPANTS

• 38 actors (21 female, 16 male, 1 non-binary), (M = 29.3 years), based in the UK with 2+ years (M = 6.7years) of professional industry experience.

EXPERIMENTAL PROTOCOL

Each task lasted 2 minutes and was repeated 4 times. During each task actors heard their own name, character name and a stranger name played from a speaker at the opposite end of the room.

Each name was played twice during each block, at pseudo-random 17-22 second intervals.

a) Acting Task: perform a pre-prepared monologue off-script to the camera

b) Colouring Book Task (control): freely colour in a mandala colouring book

C) Telephone Book Task (control): read names and numbers of UK high street stores aloud

EQUIPMENT

• Neuroimaging: 22 channel portable fNIRS system (LIGHTNIRS, Shimadzu)

• Physiology: breathing belt (Biosignalsplux)

• Behavioural: name call events (Gorilla Experiment Builder)

PRELIMINARY DATA ANALYSIS

• Pre-processing to minimise noise and select which channels to include

• GLM models each name call event

• t-tests on each channel analysing:

  A basic name call effect

  1. Own>Stranger → colouring

  2. Own>Stranger → telephone

  3. Own>Stranger → acting

  Whether character name is different to stranger name

  4. Char>Stranger → colouring

  5. Char>Stranger → telephone

  6. Char>Stranger → acting

PRELIMINARY FINDINGS

• Restructure the GLM

• Replicate this study on non-actors

NEXT STEPS

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