

# Exploring perceptions of birdsong as a restorative stimulus

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# Restorative environments

## Nature can aid recovery from stress and mental fatigue



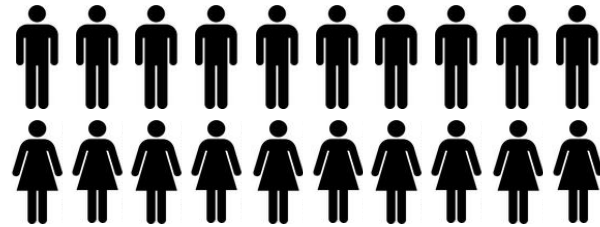
- Attention Restoration Theory (Kaplan & Kaplan, 1989)
  - Fascination
  - Being Away
  - Extent
  - Compatibility
- Stress Recovery Theory (Ulrich, 1983)
  - Emotional response to adaptive environments
- But what about non-visual nature?
  - Birdsong + water can facilitate relaxation (Alvarsson et al., 2010)
  - Restoration from birdsong alone, and between different bird sounds?



# Methodology



Semi-structured interviews on restoration via natural sounds



from **22** mean age **50** to **74**  
YEARS



Thematic Content Analysis of transcripts

# Analysis and results

186

instances of  
natural sounds

of which

%

35



24



18



12



11



# Analysis and results

**186** instances of natural sounds

of which

**%**

**35**



**75%**  
positive

**25% negative**

24



18

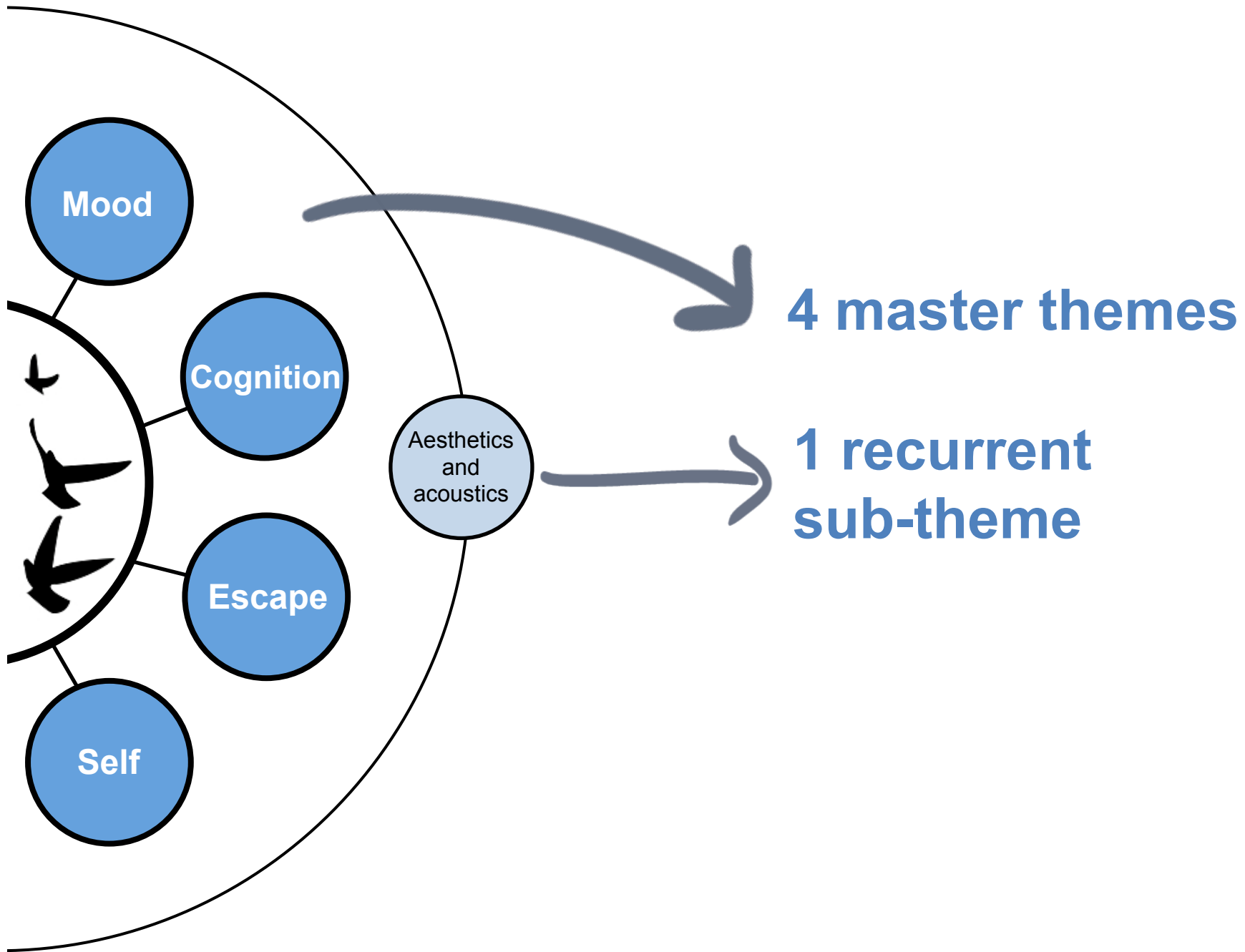


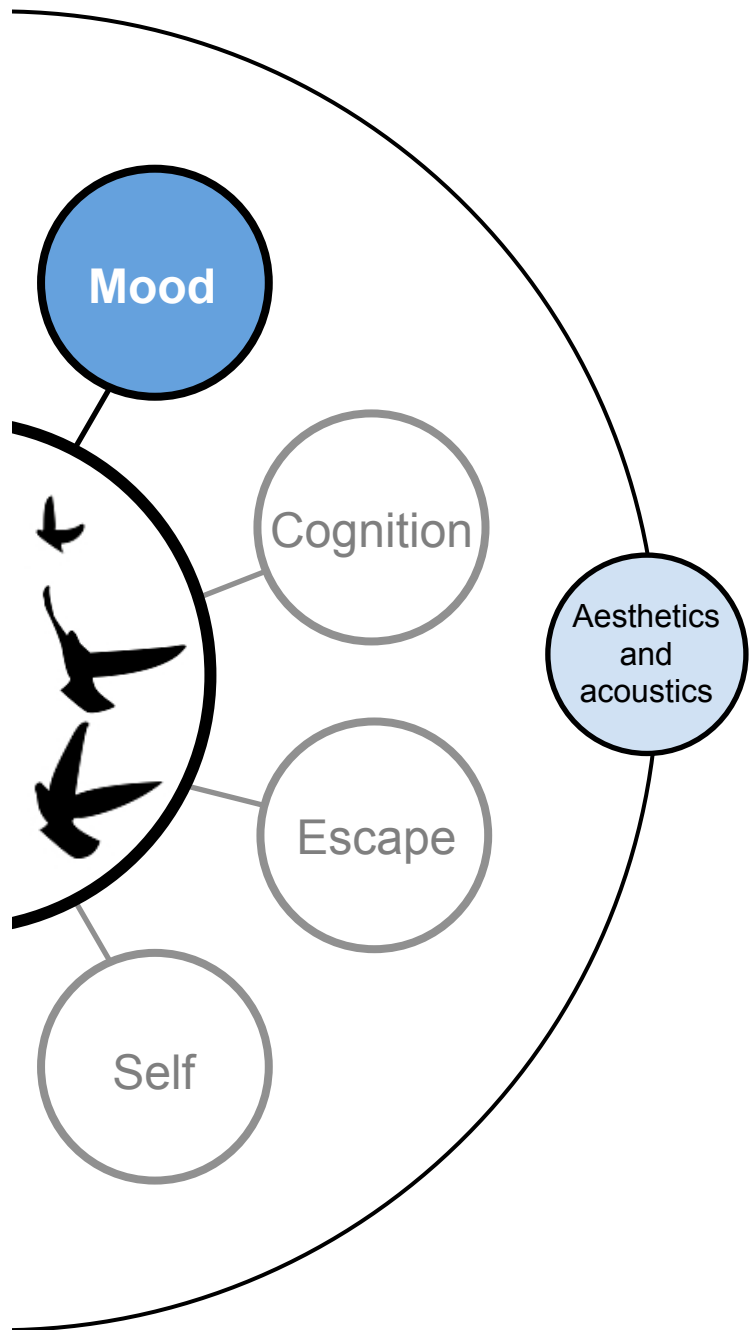
12



11







## Positive mood, low arousal

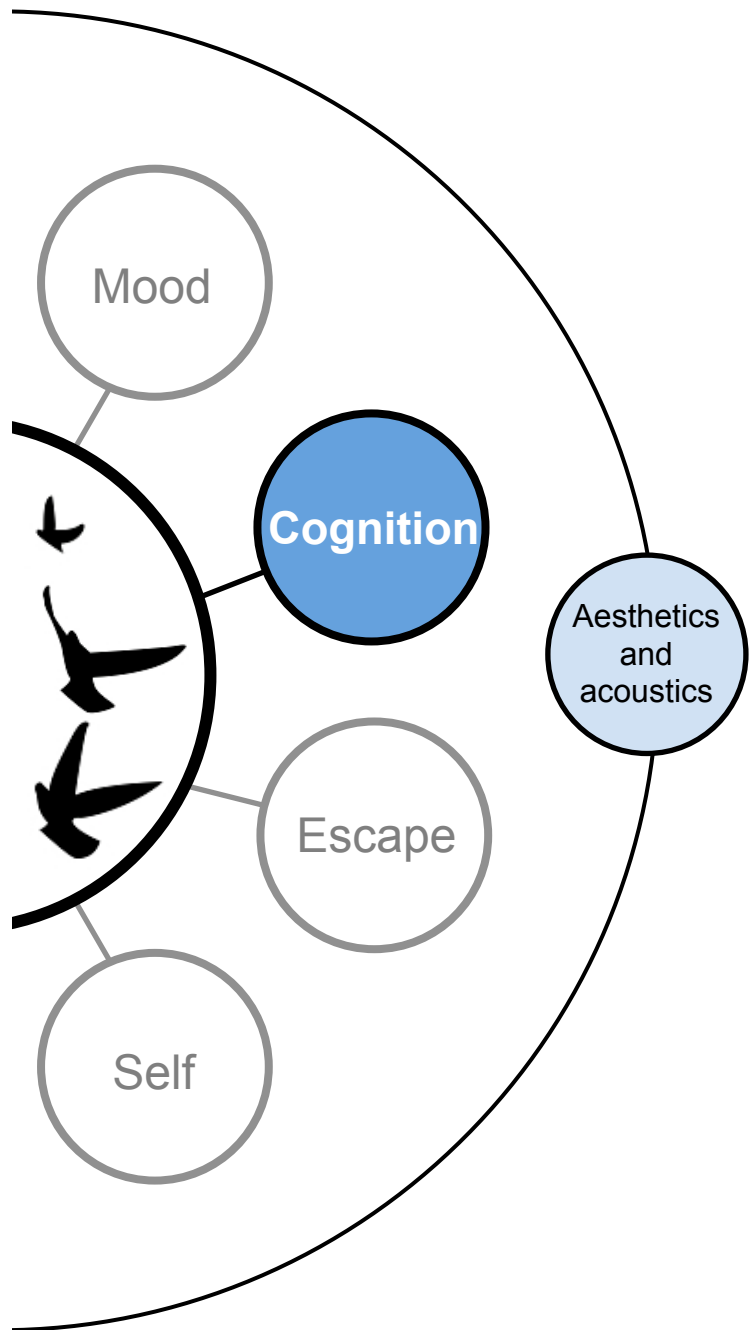
“I think it's the wood pigeon. That kind of reminds me of summer ... and so when I hear that sometimes it takes you back and you feel ... your childhood ...”

**P10, female**

## Negative mood, high arousal

“When a magpie's very raucous it means it's probably being aggressive to something else, and therefore that's a stressful sound because it's against something. It's antagonising another bird...”

**P19, male**



## Alternative focus and novelty

“It's a different sort of sound ... takes your mind off that particular piece of work that you might have been doing or trying to concentrate on.”

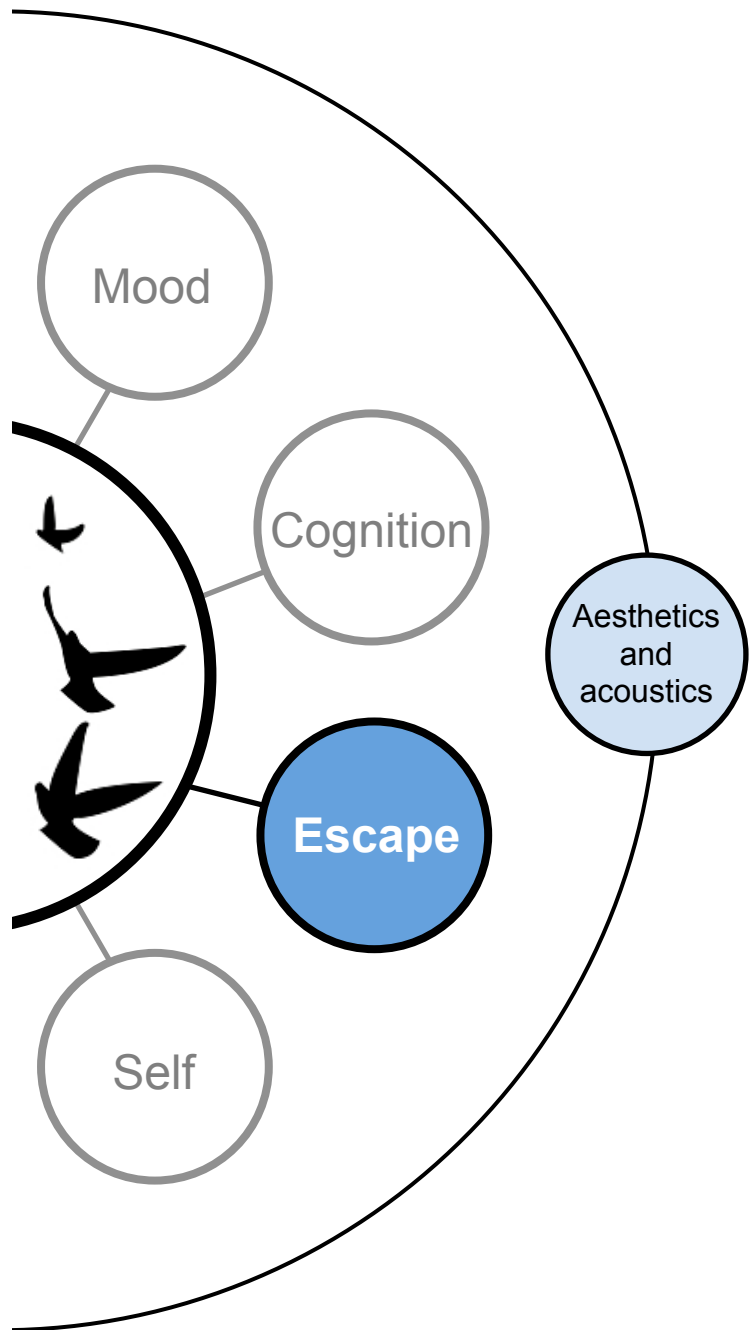
**P19, male**

## Effortless attention

“Blackbirds singing. ... Well, it's distraction, you see. Takes you away from just 'the silence'.”

**P09, male**





## Being away

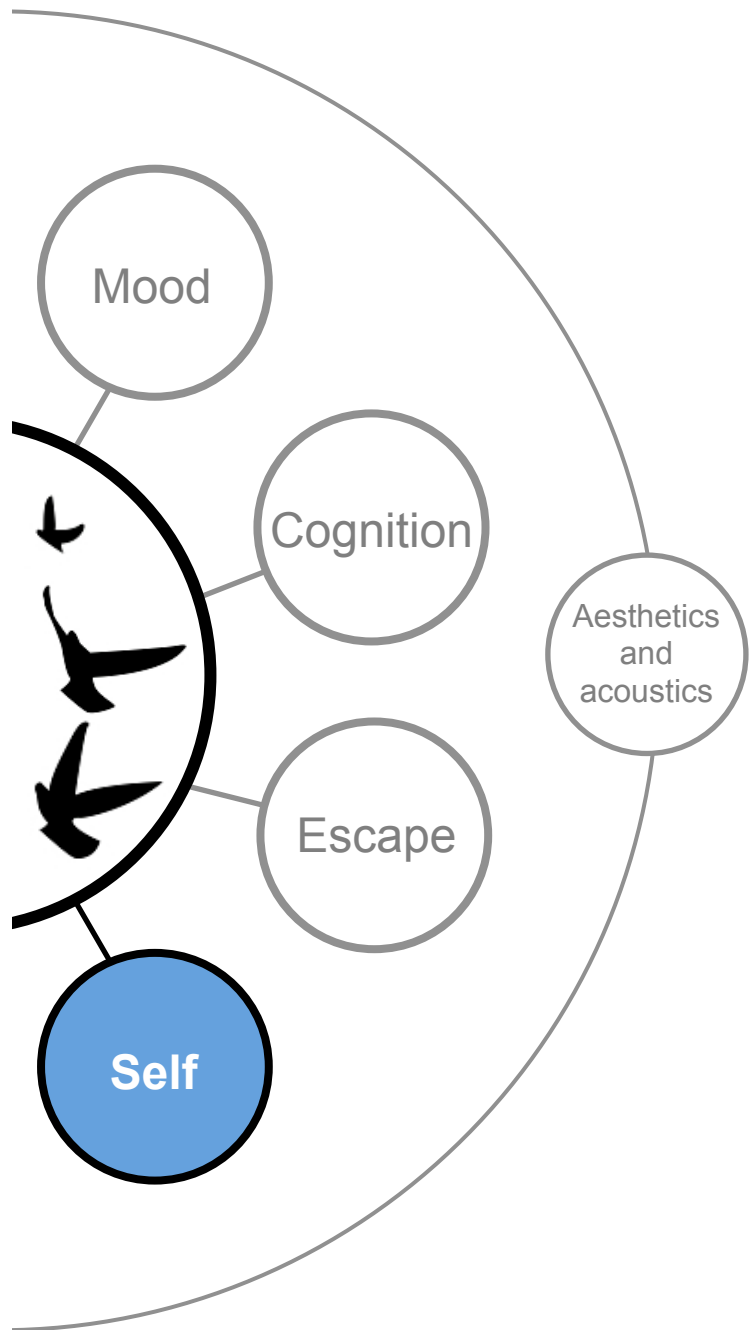
“Birds, again, because you get the odd twitter of something in the distance which can take you out of yourself, therefore it's relaxing.”

**P21, male**

## Escape through novelty

“Oh, something different. You don't normally hear it. Inside your flat or your house, you don't have that sound. I don't have a budgerigar. Other people might.”

**P19, male**



## Connection with nature

“I think you feel connected with nature and, you know, something that's a bit more ... real than some of the stressful things that happen in life.” **P10, female**

## Interactivity

“Well, this robin. It's so lovely. It's like a friend when it comes within feet of you and just sits there, singing.” **P07, female**

## Compatibility

“I mean, most nature noises like birds ... they bother me, if I'm in that mood.”

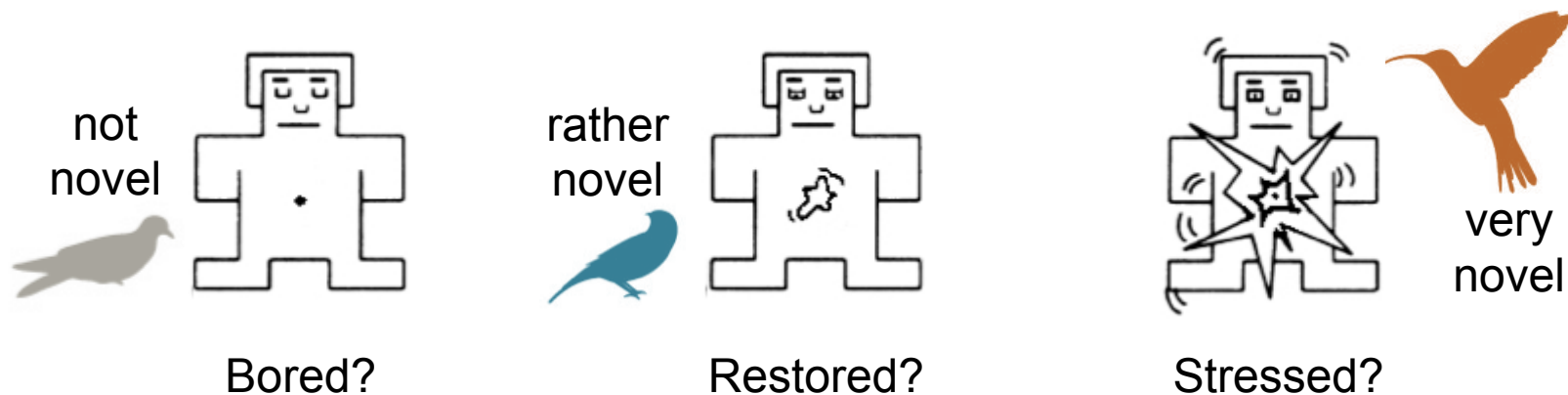
**P17, female**

# Conclusions

- Bird sounds matter for auditory restoration
  - But not all birds are restorative
- Four themes mediate restoration via bird sounds:
  - **Emotional response**
    - Pleasant, non-threatening bird sounds (SRT, psycho-evolutionary)
  - **Cognitive response**
    - Easily processed, novel bird sounds (ART: Fascination)
  - **Escape**
    - Novel bird sounds, away from the everyday (ART: Being Away)
  - **Nature & self**
    - Bird sounds can increase connection with nature, but depends on personality (ART: Compatibility)

# New questions

- Restoration varies between birds and between people
  - How does this differ across cultures?
    - Perceptions of UK and foreign birds
  - Interaction with novelty – what's the optimum level?
    - For example...



*Figures adapted from Self Assessment Manikin (SAM; Lang, 1980)*

# Thank you

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