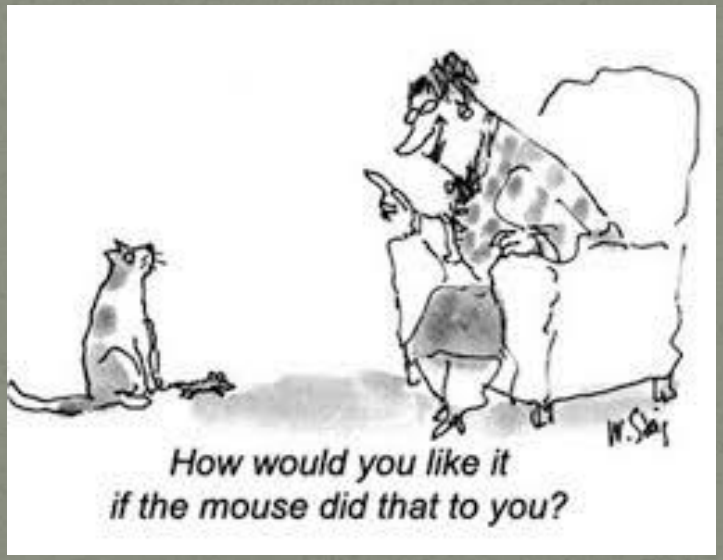
אוניברסיטת חיפה

The winner takes it all: Victory elicits greater empathy than defeat

Livnat Leemor, Federica Cavicchio, Simone Shamay-Tsoory, Wendy Sandler;
ISCOP 2017; Third GRAMBY Workshop- March 9 2017

Empathy

- Empathy is a multi-component phenomenon
  - Emotional empathy
  - Cognitive empathy



Shamay-Tsoory, 2011

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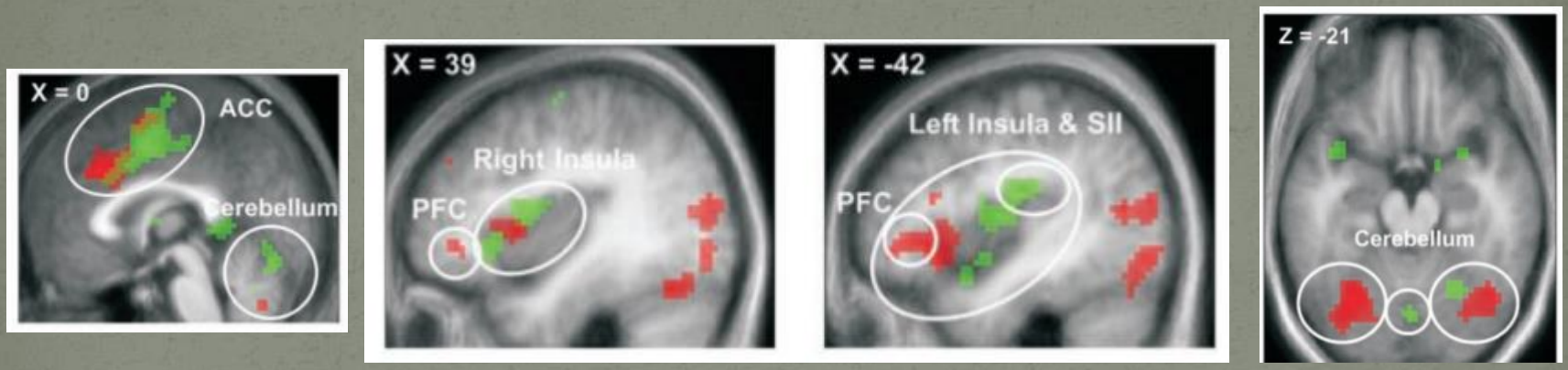
Empathy in the literature

- Research so far: empathy for different experiences
- In particular, empathy for pain

Singer et al., 2004; Lamm, Decety & Singer, 2011; Lamm, Nusbaum, Meltoff & Decety, 2007

Empathy for pain

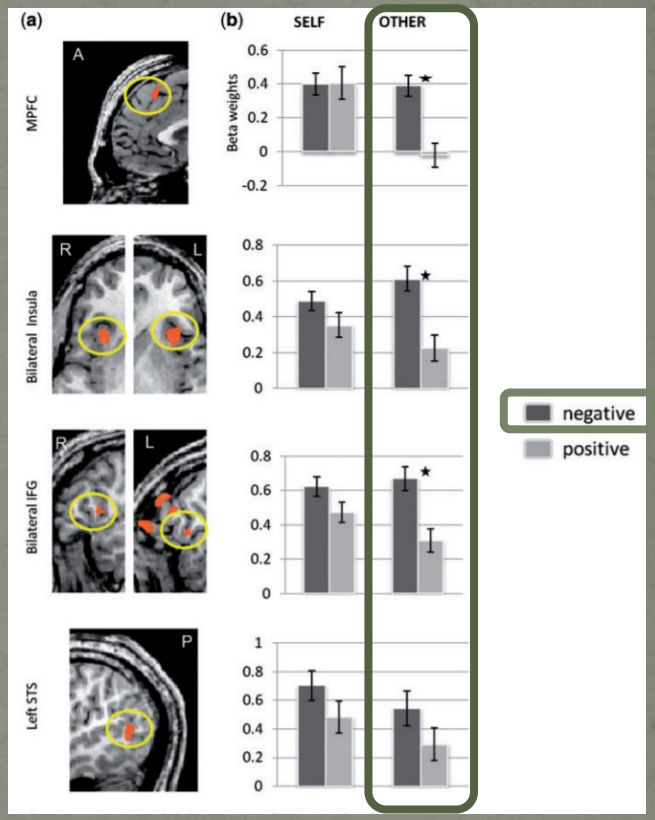
- Several brain regions are active **both** during <u>actual and observed pain</u>
- Emotional processing of a painful stimulus



Singer et al., 2004

Empathy for positive and negative emotions

- Few studies to date have investigated empathy for positive experiences
- Perry , Hendler and Shamay-Tsoory (2012):
  - neuronal responses- empathy was stronger for distress vs. joy
  - Everyday events-
    - Negative: "John lost his wallet"
    - Positive: "John won a scholarship"



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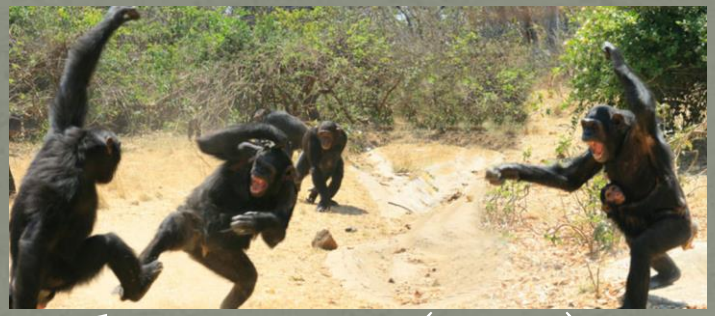
Empathy for extreme emotions

- Empathy for victory and defeat.
  - Defeat- elicits negative emotions (Van Dijk, 1999)
  - Victory- produces a range of positive emotions (Jones, 2003)

Win ← → Loss

Body displays in victory and defeat: The role of expansion

- Non-verbal displays have a communicative function among non-human primates (Palagi, 2008).



- Matsumoto and Hwang (2012) suggest that victory displays communicate social status
- Purpose of establishing dominance.

Nonverbal displays of status

- Power is expressed through nonverbal displays.
- High power: expansive, open postures
- Low power: contracted, closed postures

Carney, Cuddy, & Yap, 2010

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Cavicchio & Sandler, 2015

"Typical" losing and winning

1. Kneeling
2. Bending at the waist
3. Shoulders dropped and forward
4. Chest closed
5. Arms along the body, sometimes covering the face

1. Standing position
2. Torso back
3. Shoulders back
4. Chest open
5. Arms raised, stretched and away from the body and face

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Empathy for victory and defeat Physiological changes

Is dominance contagious?

- Changes in testosterone- found in fans who observed their favorite team winning or losing
- Changes similar to those which occur during actual winning or losing

Bernhardt et al., 1998

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Empathy to victory and defeat Physiological changes

- Elevation in testosterone levels - an improvement in mood (Anderson et al., 1999; O'Connor, Archer, Hair, & Wu, 2002)

The empathizer may benefit from emotional closeness to the winner

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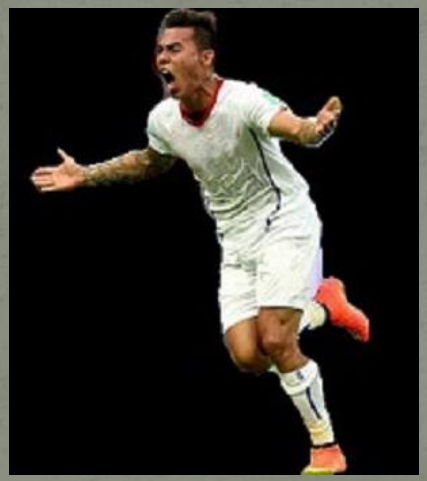
Our hypotheses

1. Empathic experience will be greater in response to victory than defeat
2. A winner presenting open posture will elicit the greatest amount of empathy



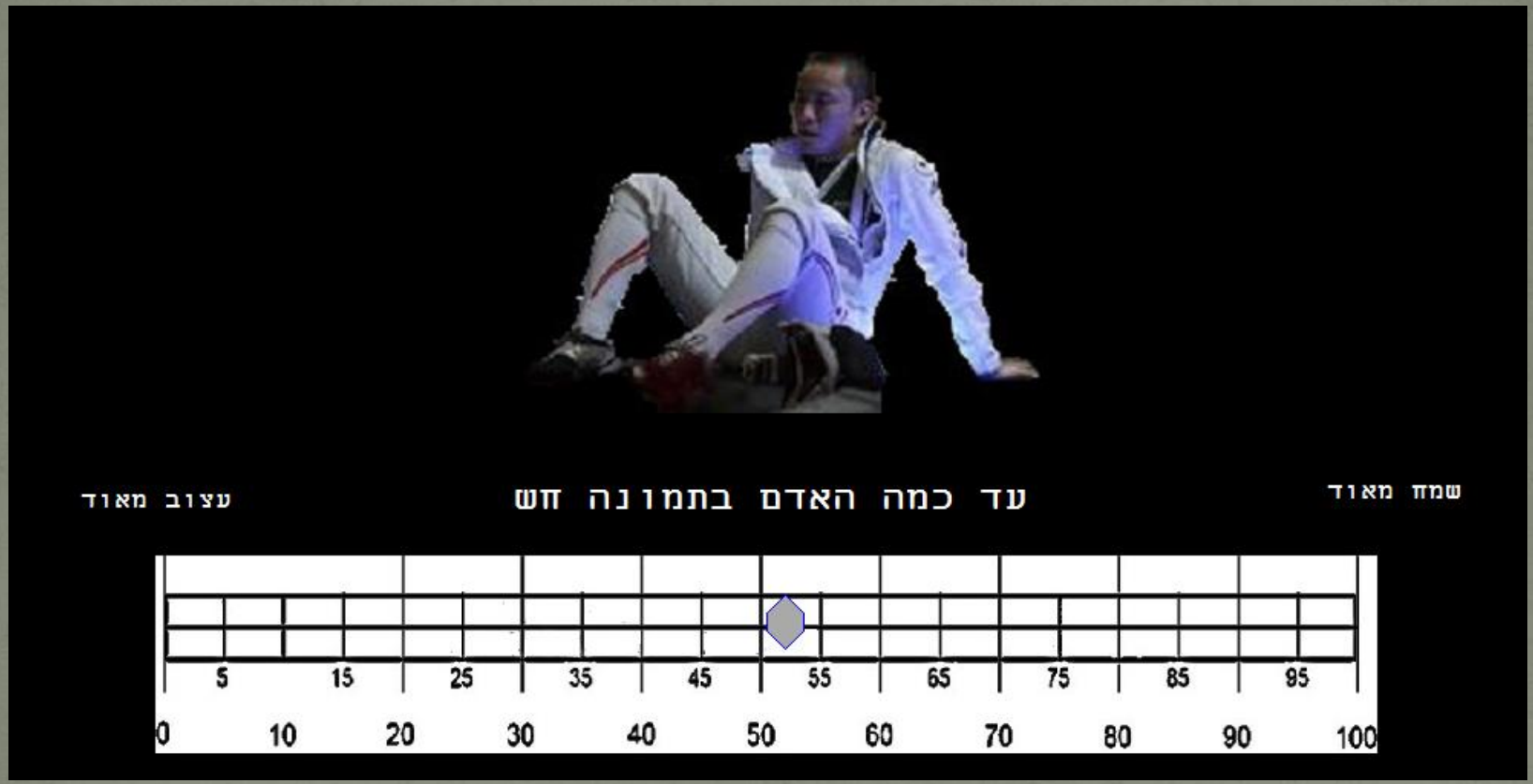
Methods

- The aims of this experiment:
  - To compare empathic experience for victory and defeat.
  - To investigate the role of expansion in empathy.

Methods

- Participants
  - 64 Hebrew speaking participants were recruited
- Materials
  - Pictures from the study of Cavicchio and Sandler (2015)

Session 1: Emotional intensity check



Results

No significance difference in emotional intensity

T= 0.076, p=ns.

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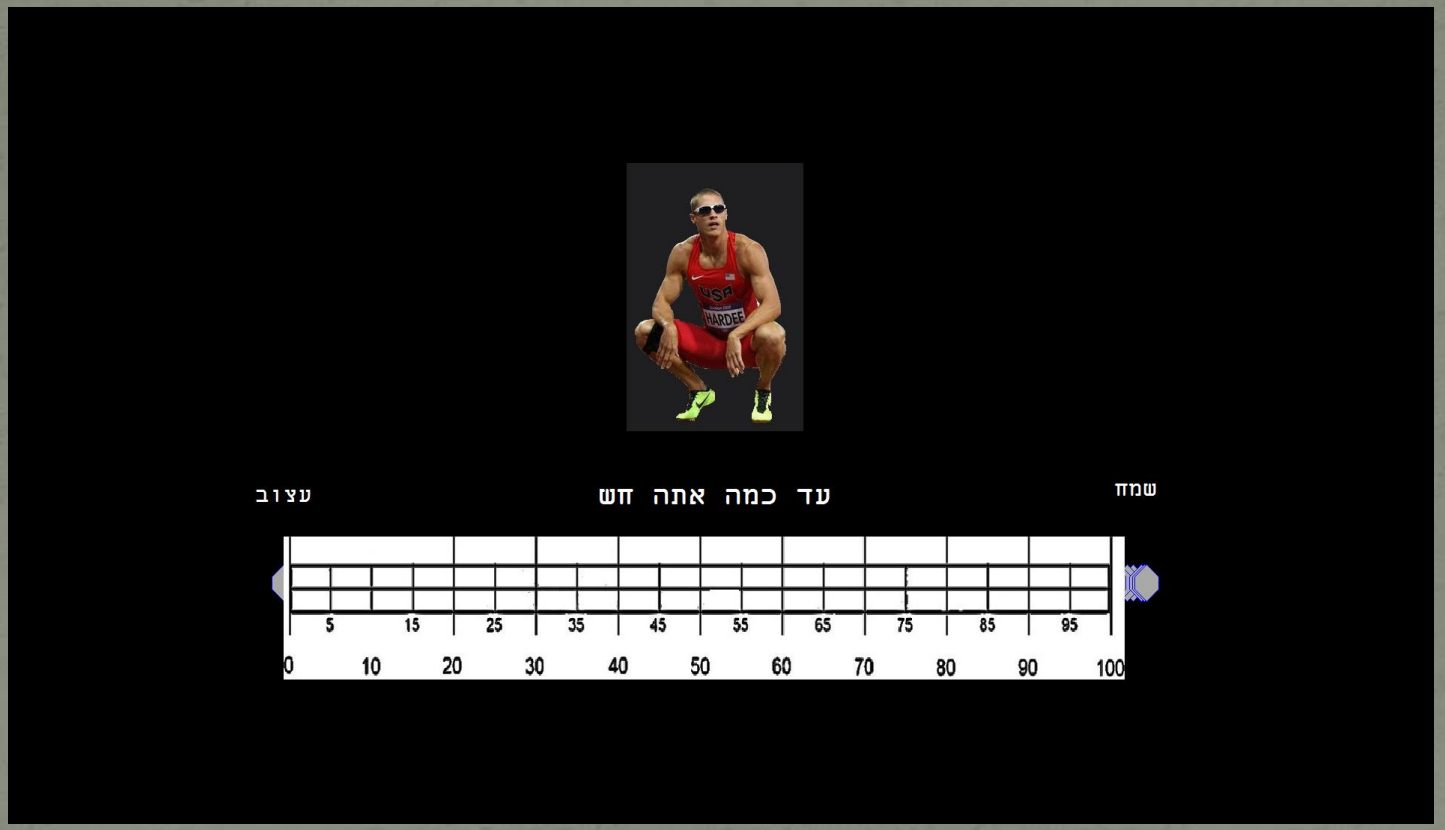
Session 2: empathy measurements



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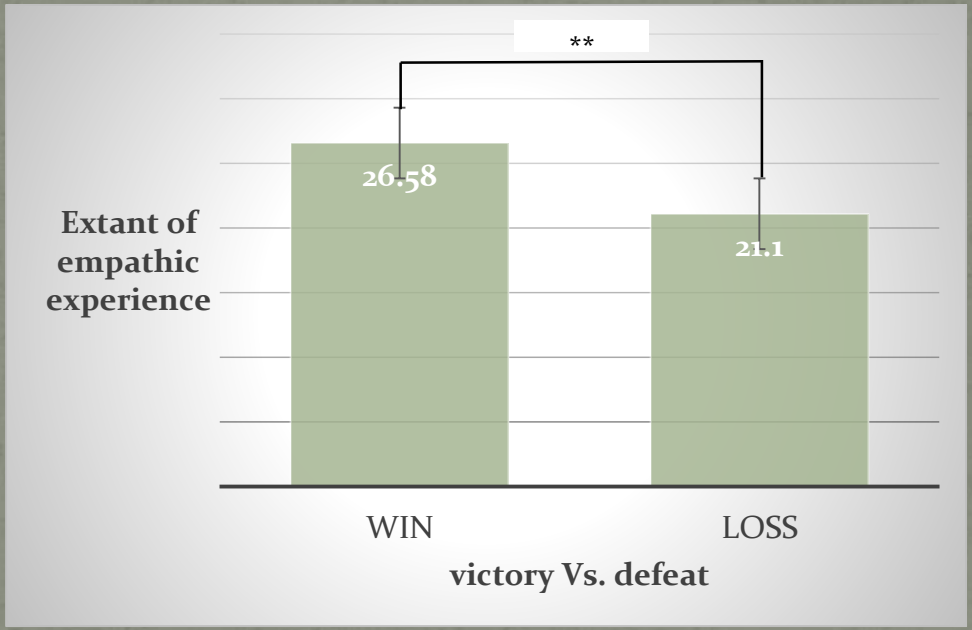
Results

Victory elicited greater empathy than defeat

- Hypothesis no. 1: victory will elicit more empathy than defeat
- Repeated Measures ANOVA

F=8.85, p<0.005



Session 2: expansion measurements

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Results

Conditions- 2X2

Light gray- Prototypical

Blue- A-typical

A total of 184 pictures

Victory-Dominant (high expansion) 	**Defeat- Non dominant (low expansion)** 
Victory- Non dominant (low expansion) 	Defeat- Dominant (high expansion) 

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Results

Open victory elicited the greatest amount of empathy

- Hypothesis no. 2: open victory will elicit the greatest amount of empathy in the observer
- Interaction effect: open\closed victory Vs. open\closed defeat
- A Within Two-Way ANOVA

$F=164.74$, $p<0.005$

Y-axis: Extent of empathic experience

Discussion-Conclusions

- In accordance with our hypotheses
  - Empathy was the greatest for victory
  - More specifically, for open victory.
  - The mixed displays (open loss and closed win) elicited the least amount of empathy.

Discussion-Explanations

- Open victory
  - Dominance maybe contagious with its positive effect

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Discussion-Explanations

- Mixed displays
  - Participants became confused, receiving mixed signals

Discussion-future research

- The next step will be to use controlled avatars as stimuli.
- Finally, we will conduct an fMRI experiment.

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