Predictive anticipatory activity: How do biological systems pre-spond to future events?

Julia Mossbridge, PhD

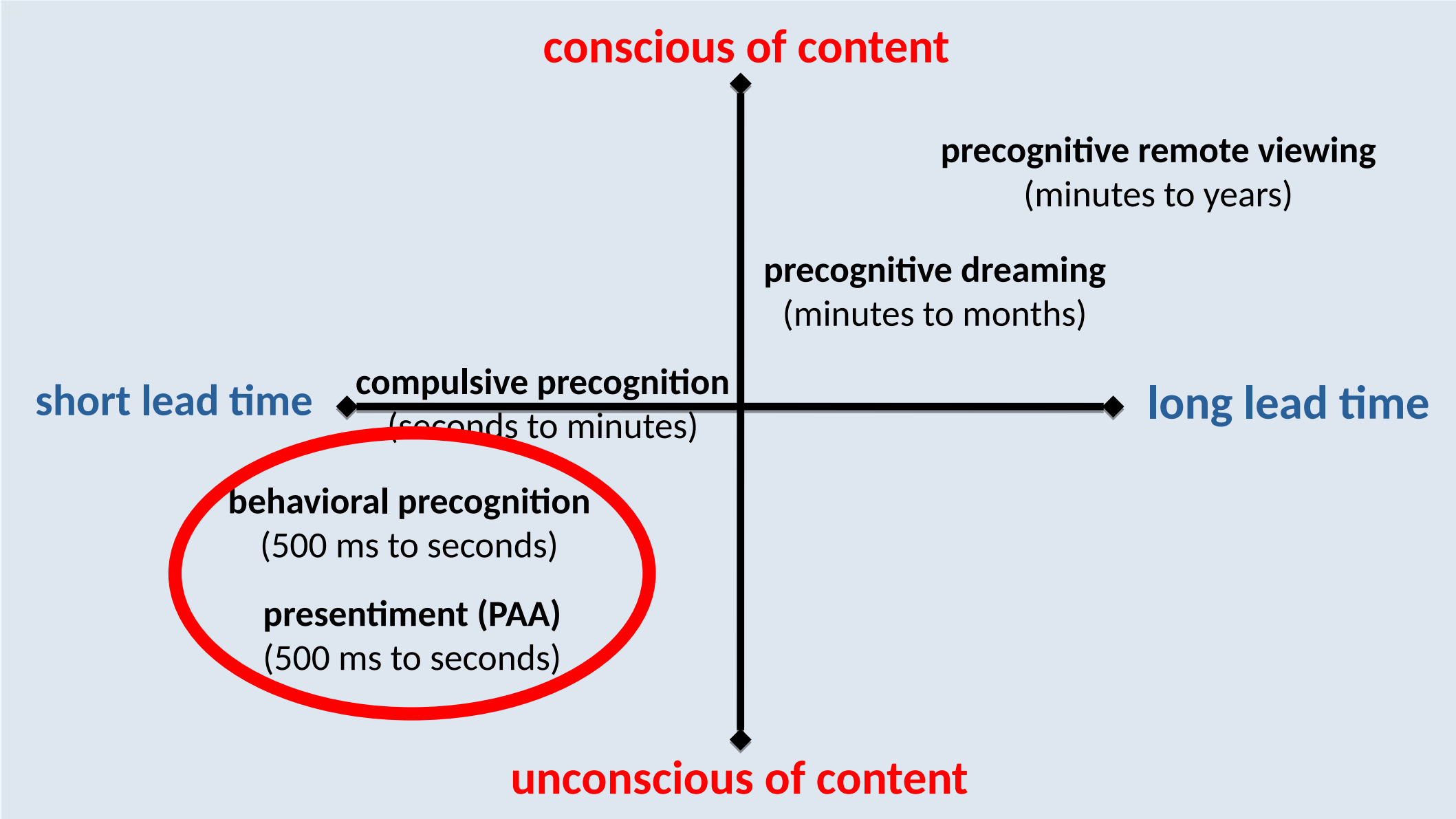
Behind and Beyond the Brain: The Mystery of Time

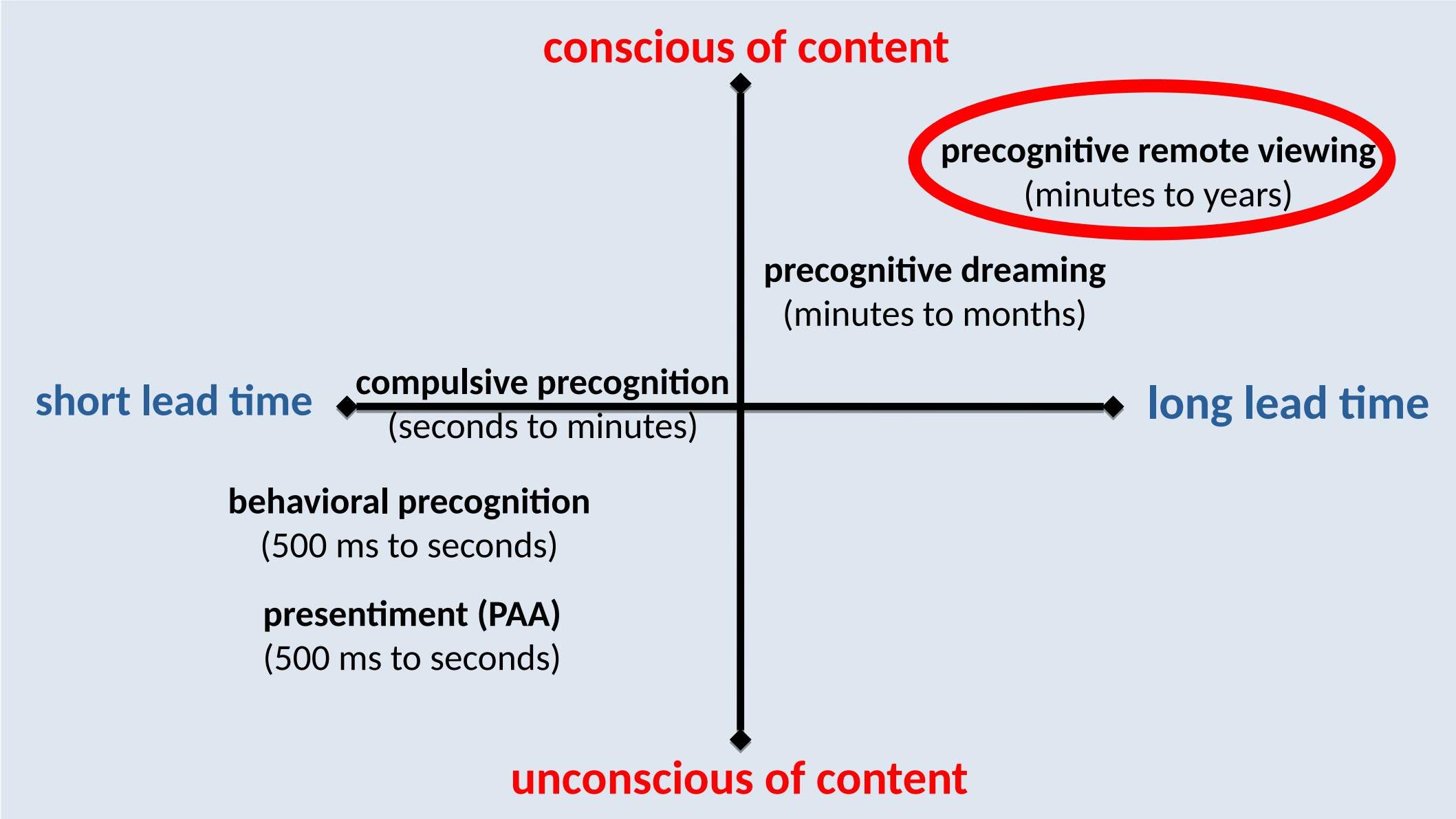
13th Symposium of the Bial Foundation

April 8, 2022

Precognition (Precog/Presentiment): Cognition, perception, behavior, or physiology that reliably predicts future events that are not otherwise predictable by:

1. direct cause
2. conscious inference
3. unconscious inference


conscious of content
precognitive remote viewing
(minutes to years)
precognitive dreaming
(minutes to months)
short lead time
compulsive precognition
(seconds to minutes)
long lead time
behavioral precognition
(500 ms to seconds)
presentiment (PAA)
(500 ms to seconds)
unconscious of content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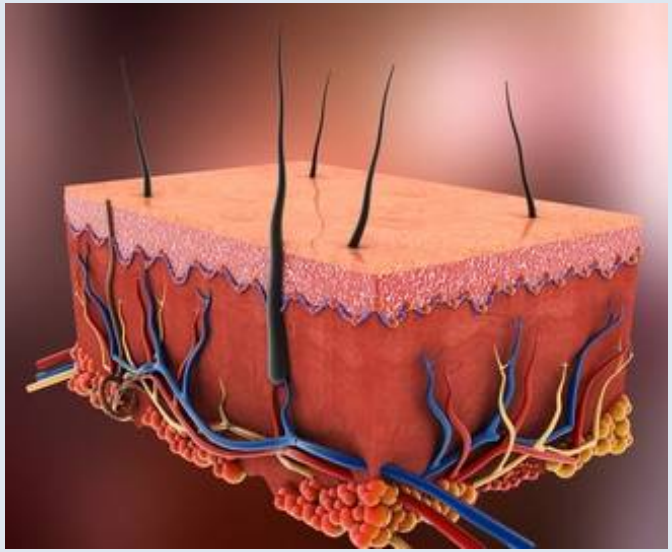
How to do a precognition experiment

1. Record data for a period of time.

2. Randomly select an event.

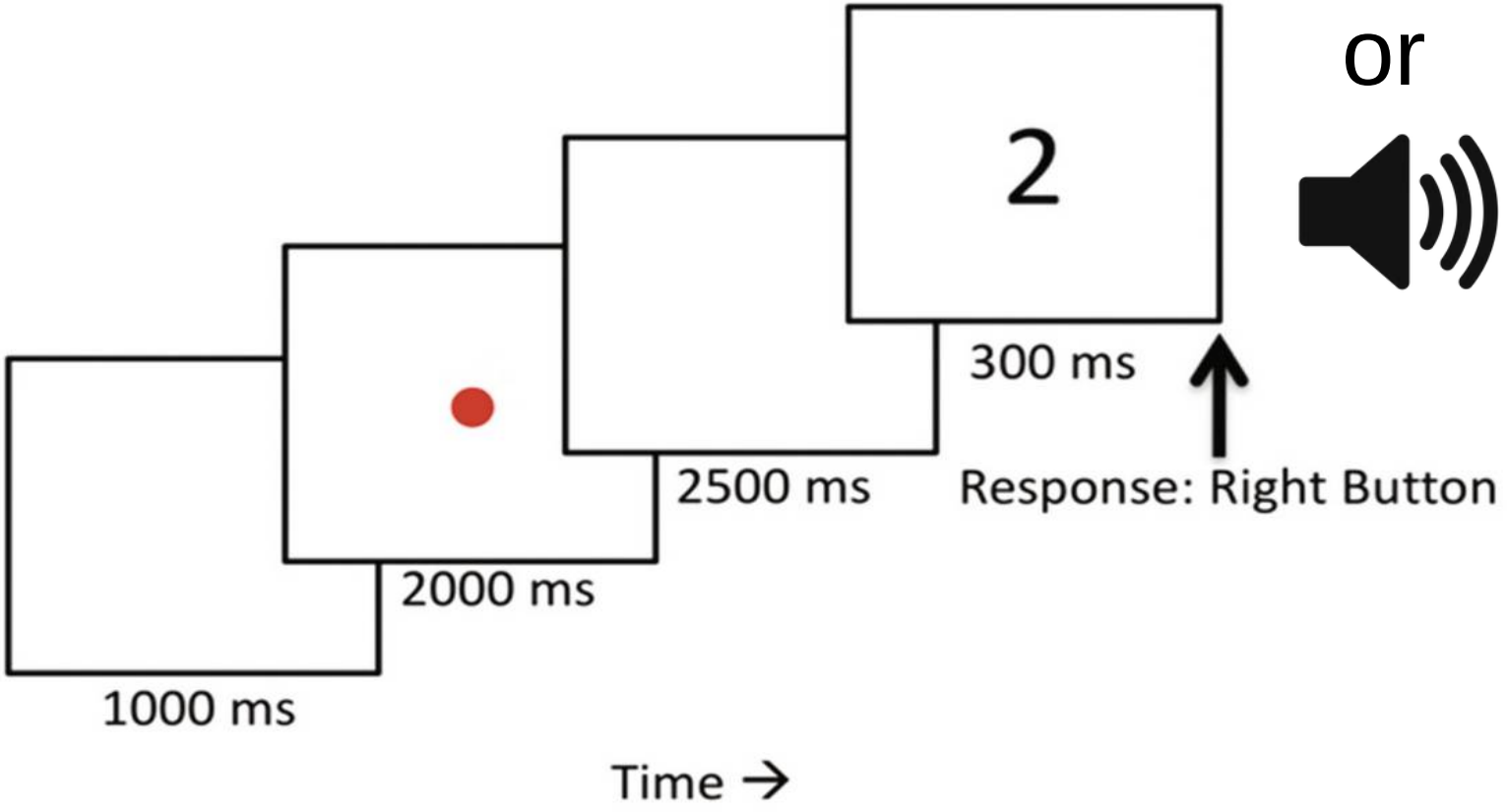
3. Ask: Did the data you recorded in 1 predict the event in 2?

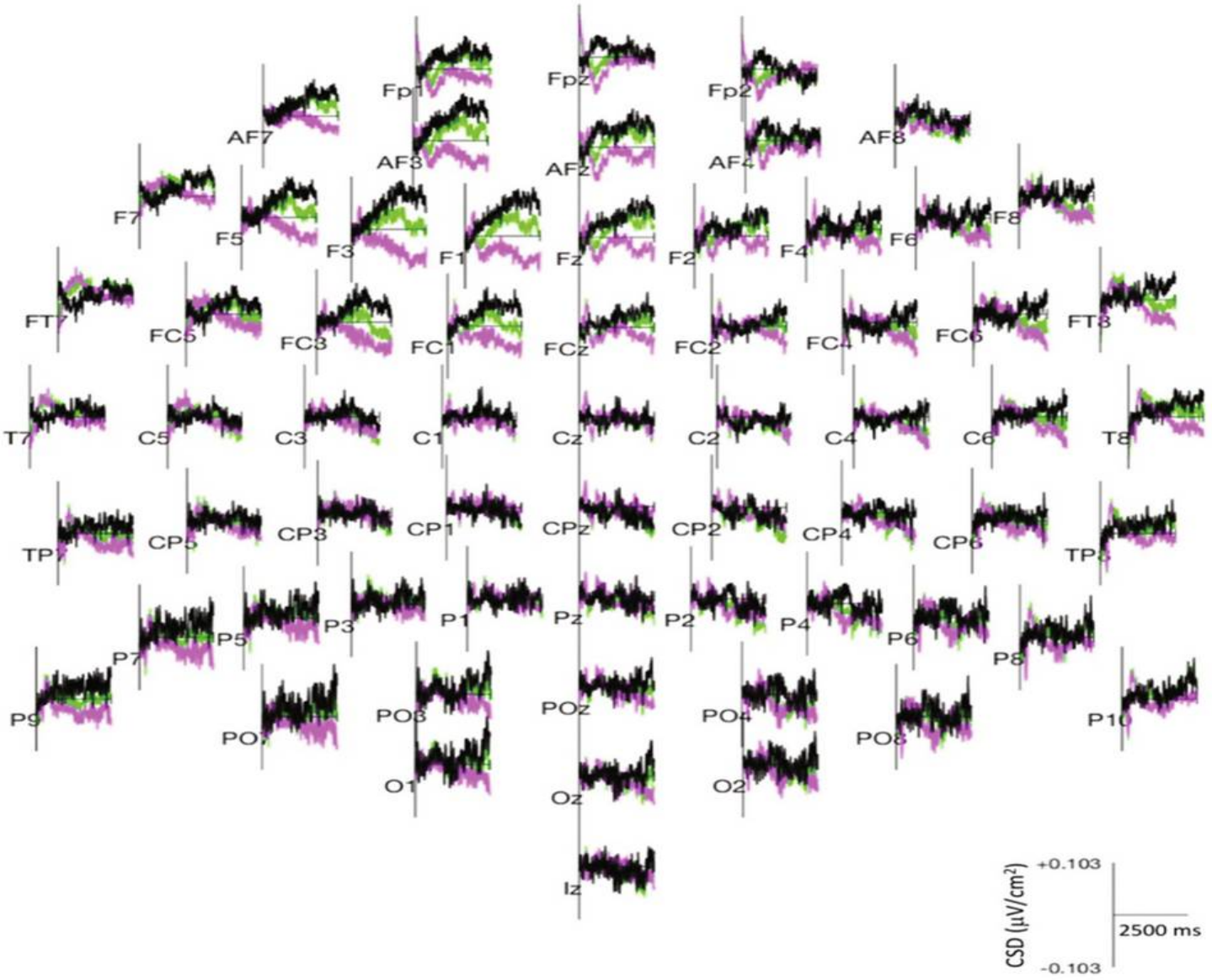
Human presentiment

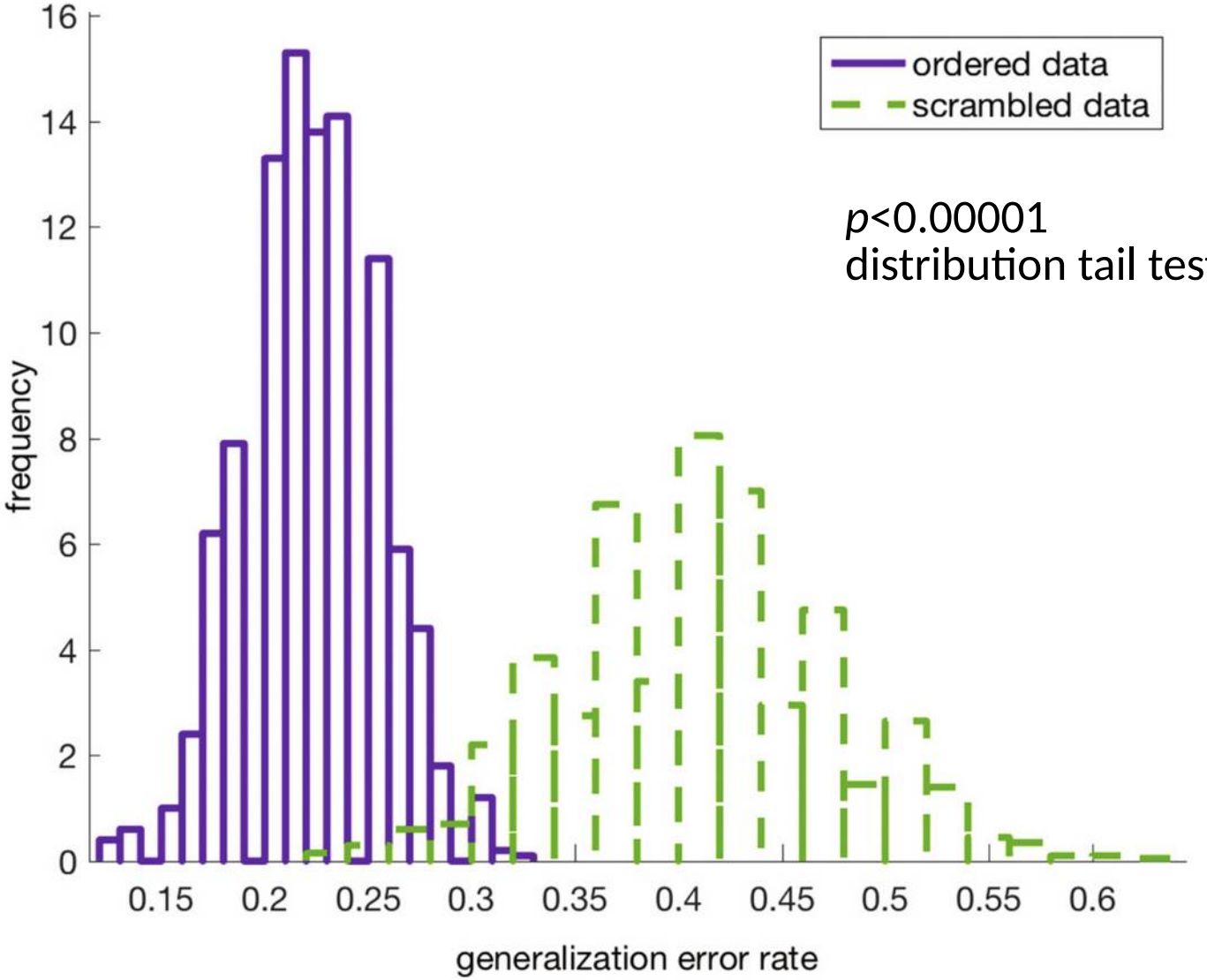


Human presentiment

Human presentiment

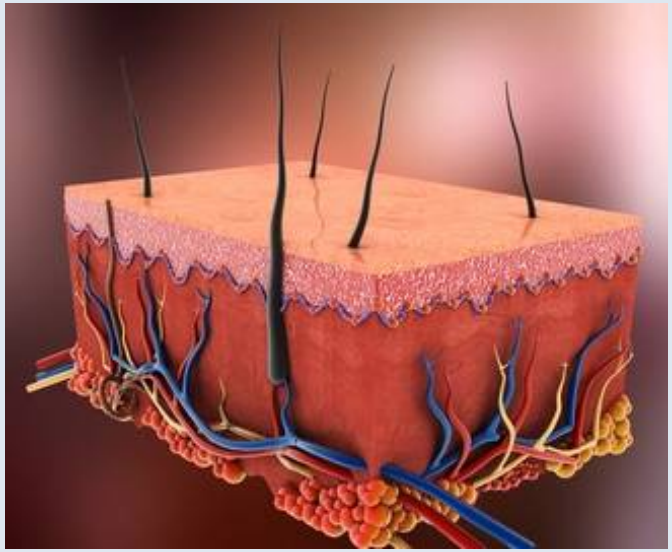



Fp1
Fpz
Fp2
AF7
AF3
AFz
AF4
AF8
F7
F5
F3
F1
Fz
F2
F4
F6
F8
FT7
FC5
FC3
FC1
FCz
FC2
FC4
FC6
FT8
T7
C5
C3
C1
Cz
C2
C4
C6
T8
CP5
CP3
CP1
CPz
CP2
CP4
CP6
P7
P5
P3
P1
Pz
P2
P4
P6
P8
P9
PO7
PO3
POz
PO4
PO8
P10
O1
Oz
O2
Iz
CSD (μV/cm²)
+0.103
-0.103
2500 ms

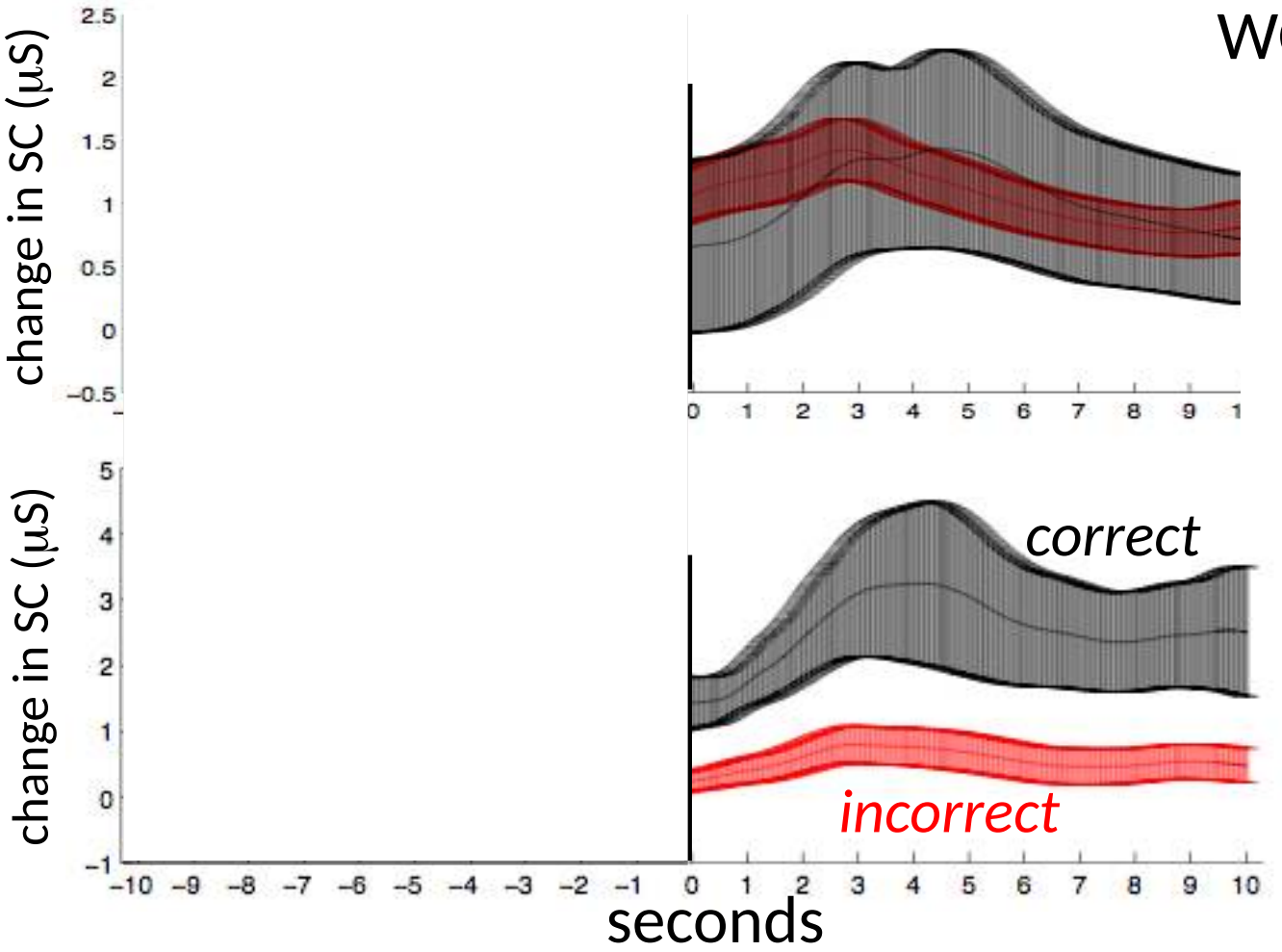


p<0.00001
distribution tail test

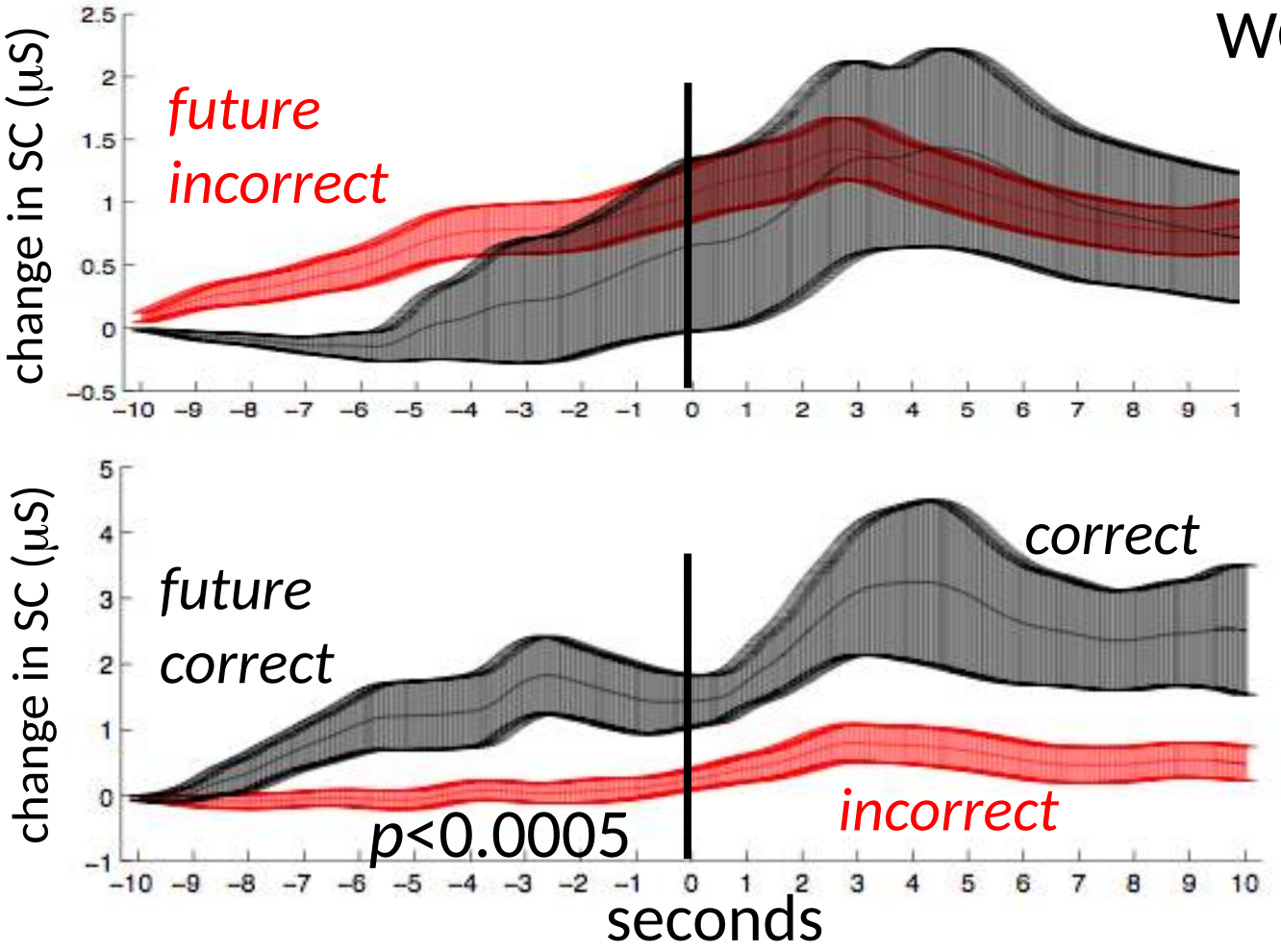
Human presentiment



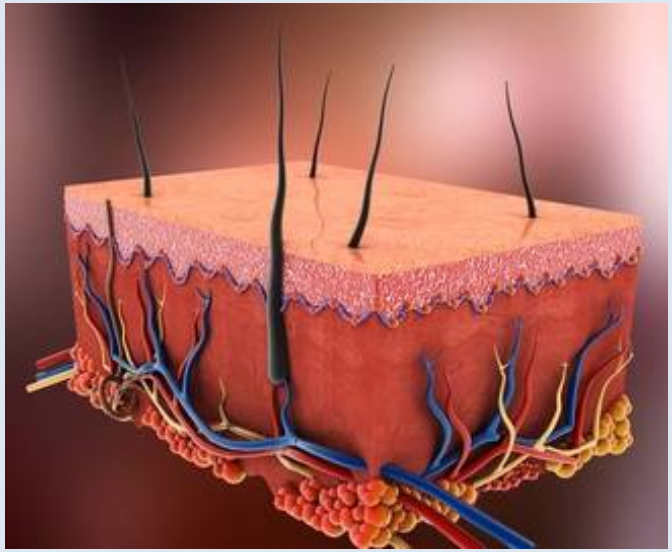
First trials only (no order effects)



gender x correctness interaction (p<0.004)



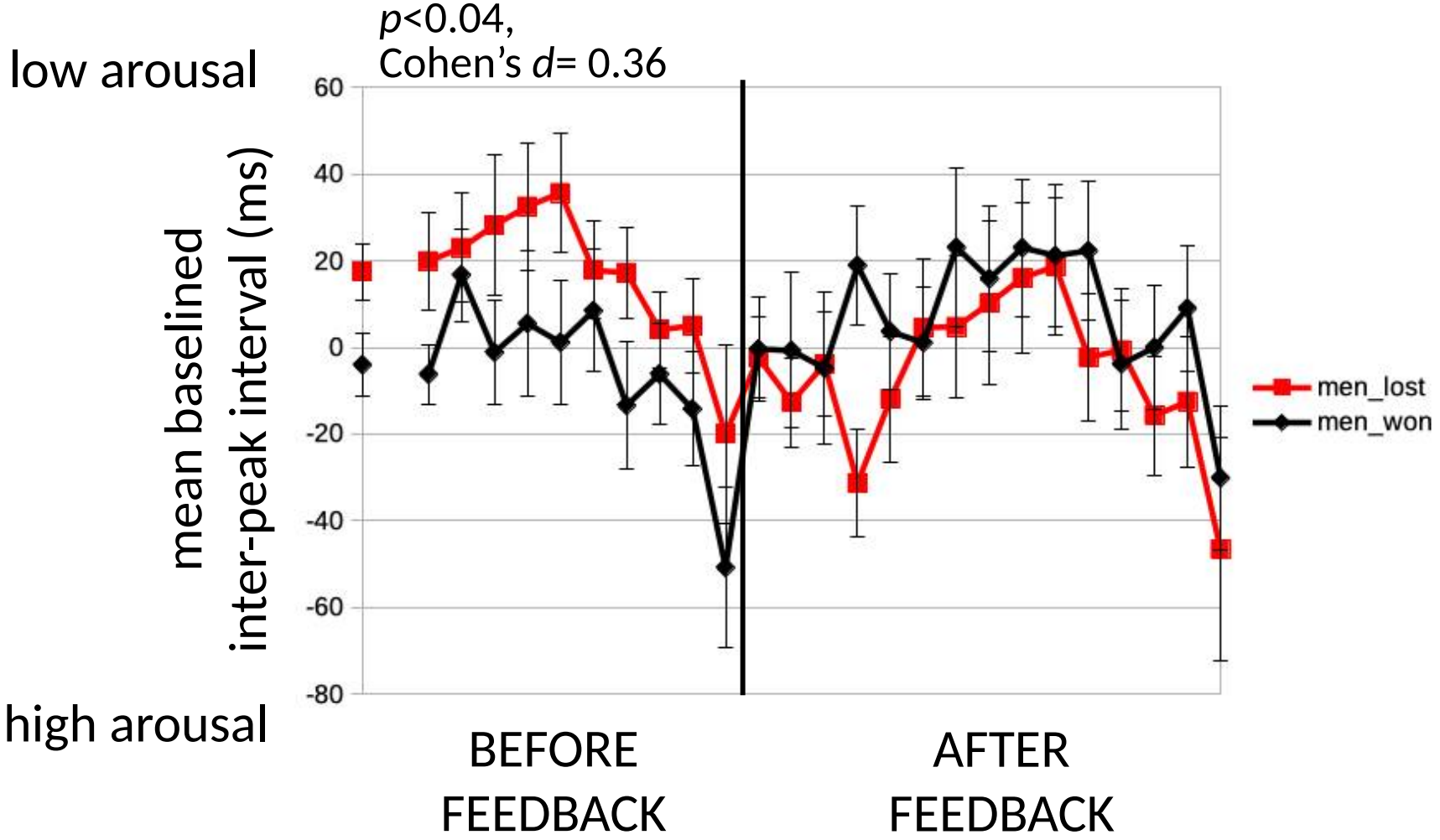
Human presentiment



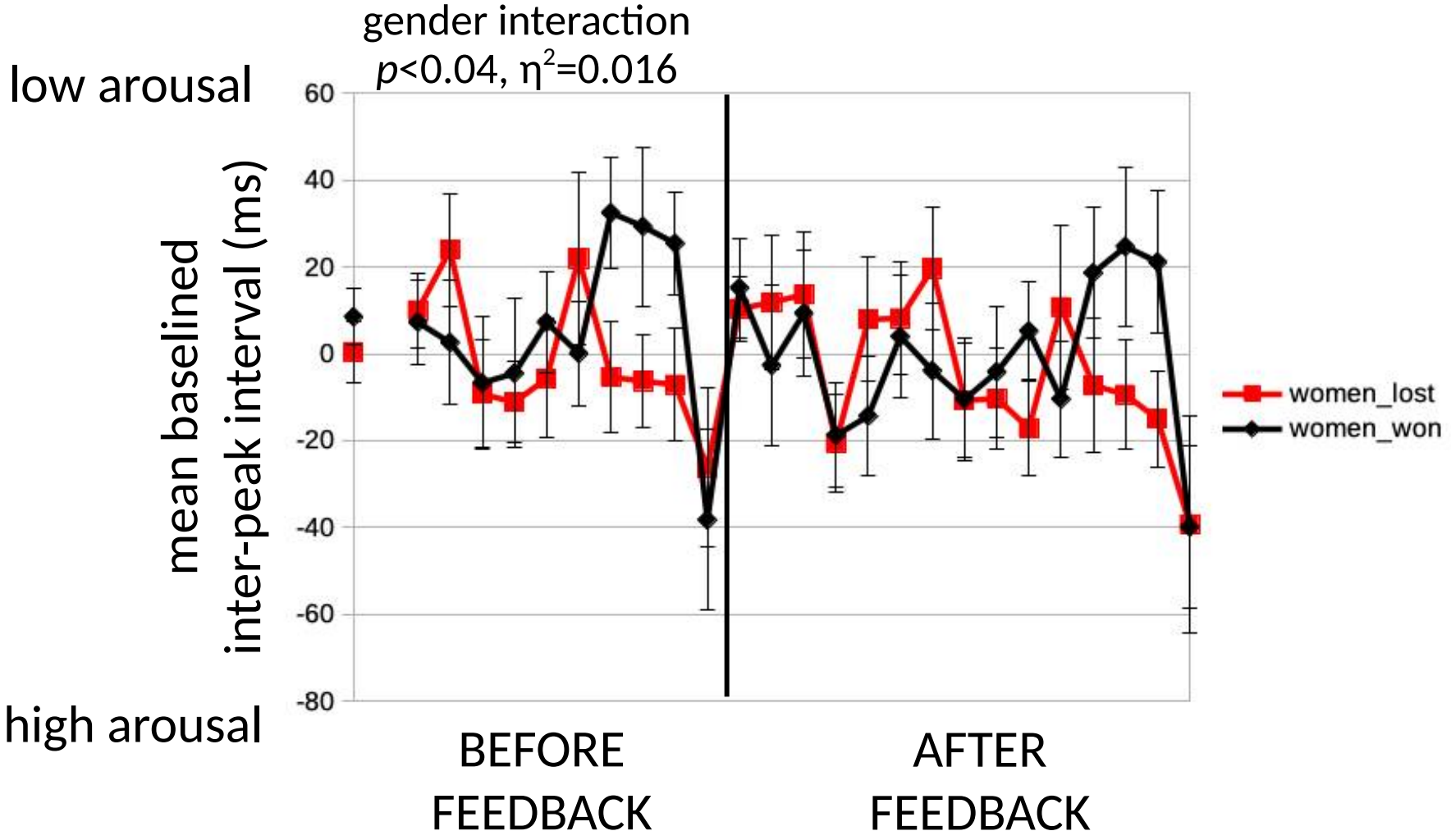
Similar paradigm, with heart beats (pre-registered experiment)

Heart Tracker Research App

$2 prize, one trial: MEN (N=147)



$2 prize, one trial: WOMEN (N=145)



ORIGINAL RESEARCH article

Front. Psychol., 17 October 2012 | https://doi.org/10.3389/fpsyg.2012.00390

Predictive physiological anticipation preceding seemingly unpredictable stimuli: a meta-analysis

Julia Mossbridge[1]*, Patrizio Tressoldi[2] and Jessica Utts[3]

Download Article Export citation

119,385
TOTAL VIEWS

Am score 259

99%
Views rank

This article has more views than 99% of all Frontiers articles.

N=26; 1978-2010; ES=0.21 95% CI=0.13–0.29

Random effects: z=5.3, $p<5.7\times10^{-8}$

Fixed effect: z=6.9, $p<2.7\times10^{-12}$

fail-safe: 87 non-significant studies

Check for updates

SYSTEMATIC REVIEW

UPDATE Predictive physiological anticipatory activity preceding seemingly unpredictable stimuli: An update of Mossbridge *et al* 's meta-analysis [version 2; referees: 2 approved]

Previously titled: Predictive physiological anticipation preceding seemingly unpredictable stimuli: An update of Mossbridge *et al*'s meta-analysis

Michael Duggan[1], Patrizio Tressoldi [2]

[1]Independent researcher, Birmingham, UK
[2]Dipartimento di Psicologia Generale, Universita di Padova, Padova, Italy

N=36; 2008-2018; ES=0.28 95% CI=0.18–0.38
pre-registered ES=0.31 > not pre-registered ES=0.24

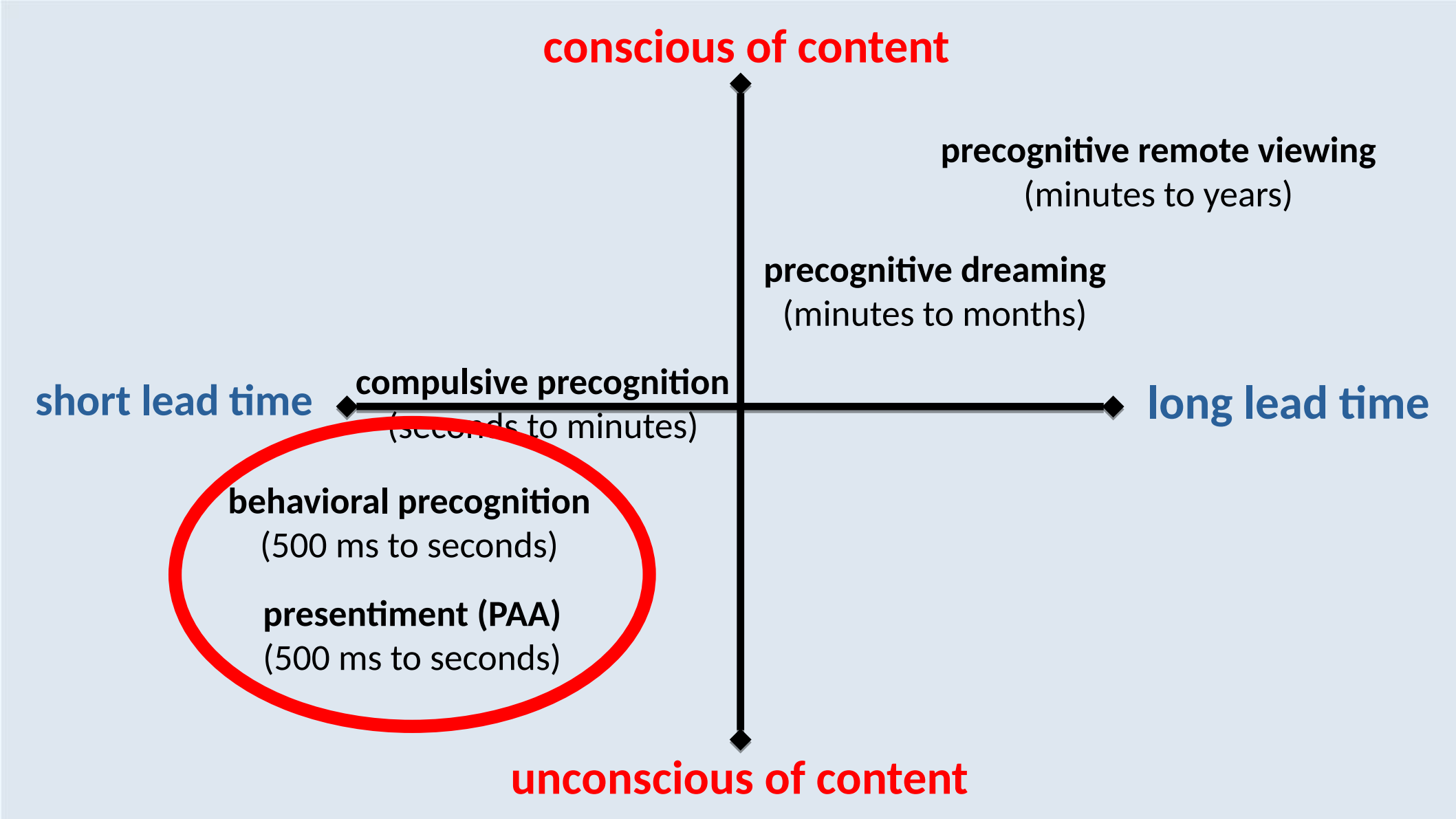
Nonhuman PAA/precognition

Type of nonhuman	Author(s)	Year	Effect
dogs	Sheldrake & Smart	2000	behav. precog
earthworms	Wildey	2001	presentiment
birds	Alvarez	2010a,b	behav. precog x 2
mice	Dragoi & Tonegawa	2011	“preplay”
REG	Moddel; Moddel	2011; 2013	presentiment like (PL); no effect
planaria	Alvarez	2016	behav. precog
fish	Mothersill et al.	2018	PL (biochemical)
photons	Mossbridge; Mossbridge & Williams	2021a,b	PL (optical) x 2

Behavioral precognition during pregnancy?

2017. Mossbridge & Bem, full study
Yes (trend)

2018. Mossbridge, pilot study
Yes (significant)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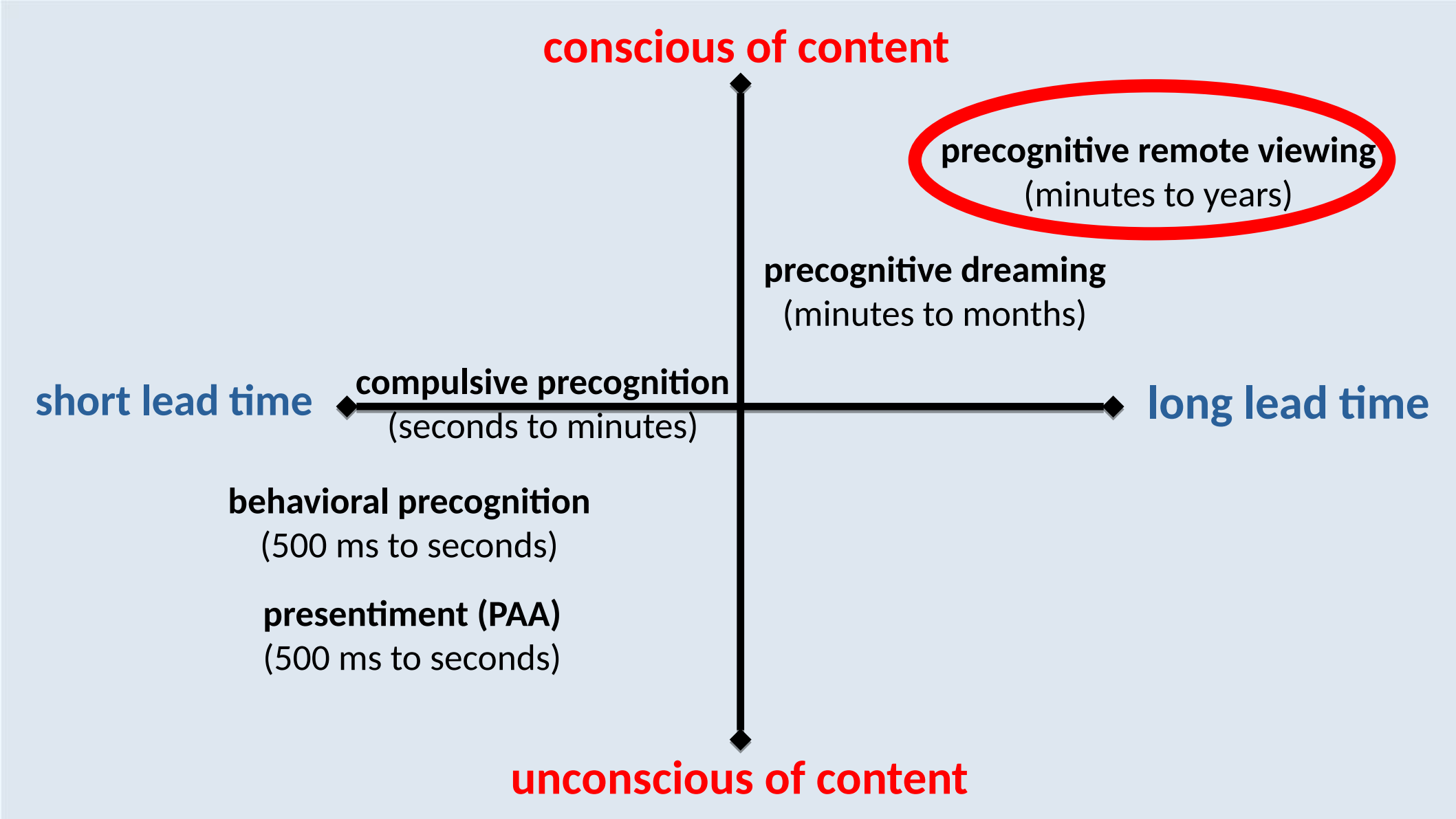
Summary: Presentiment and behavioral precognition

1. Perhaps a gender-relevant mechanism

2. Nonhumans (including machines and photons) display it

3. Sensing probability and/or future response to feedback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"Precognition, in which the answer is known to no one until a future time, appears to work quite well."

– Jessica Utts

ASA President 2016

JSE 10(1) 1996, p.3

American Institutes for Research 1995

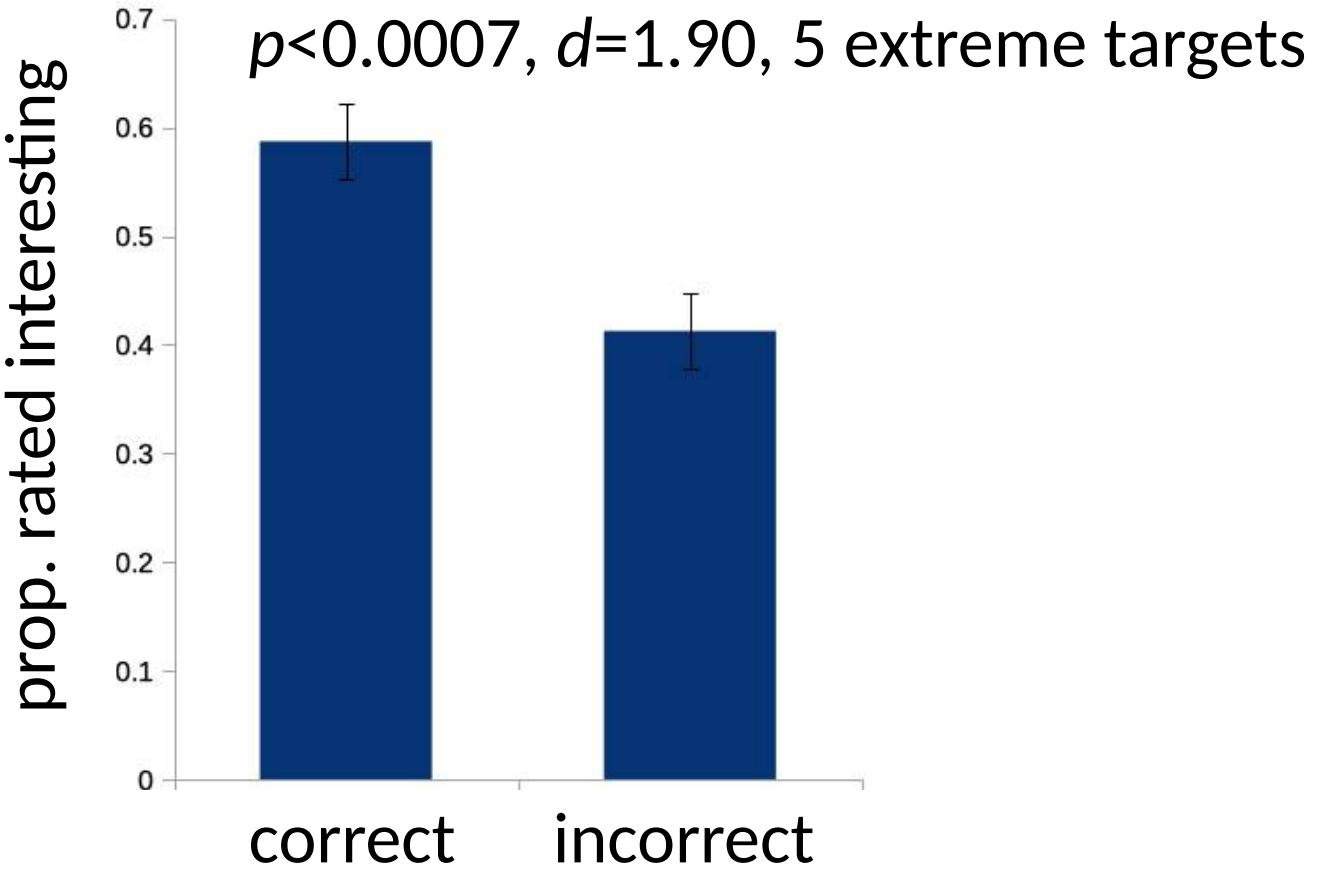
Anecdotal reports from precognitive RV

1. By definition conscious
2. No clear gender difference
3. Feedback may not be necessary
4. Greater accuracy on interesting/meaningful targets
5. Better performance when in a good/expansive mood

Confirmed results from precognitive RV

1. By definition conscious ✓
2. No clear gender difference ✓
3. Feedback may not be necessary ✓
4. Greater accuracy on interesting/meaningful targets
   → Mossbridge & Boccuzzi, in prep
5. Better performance when in a good/expansive mood

Interesting future targets seem to draw precognitive attention, study 2 (replication)



Interesting future targets seem to draw precognitive attention, study 3

Confirmed results from precognitive RV

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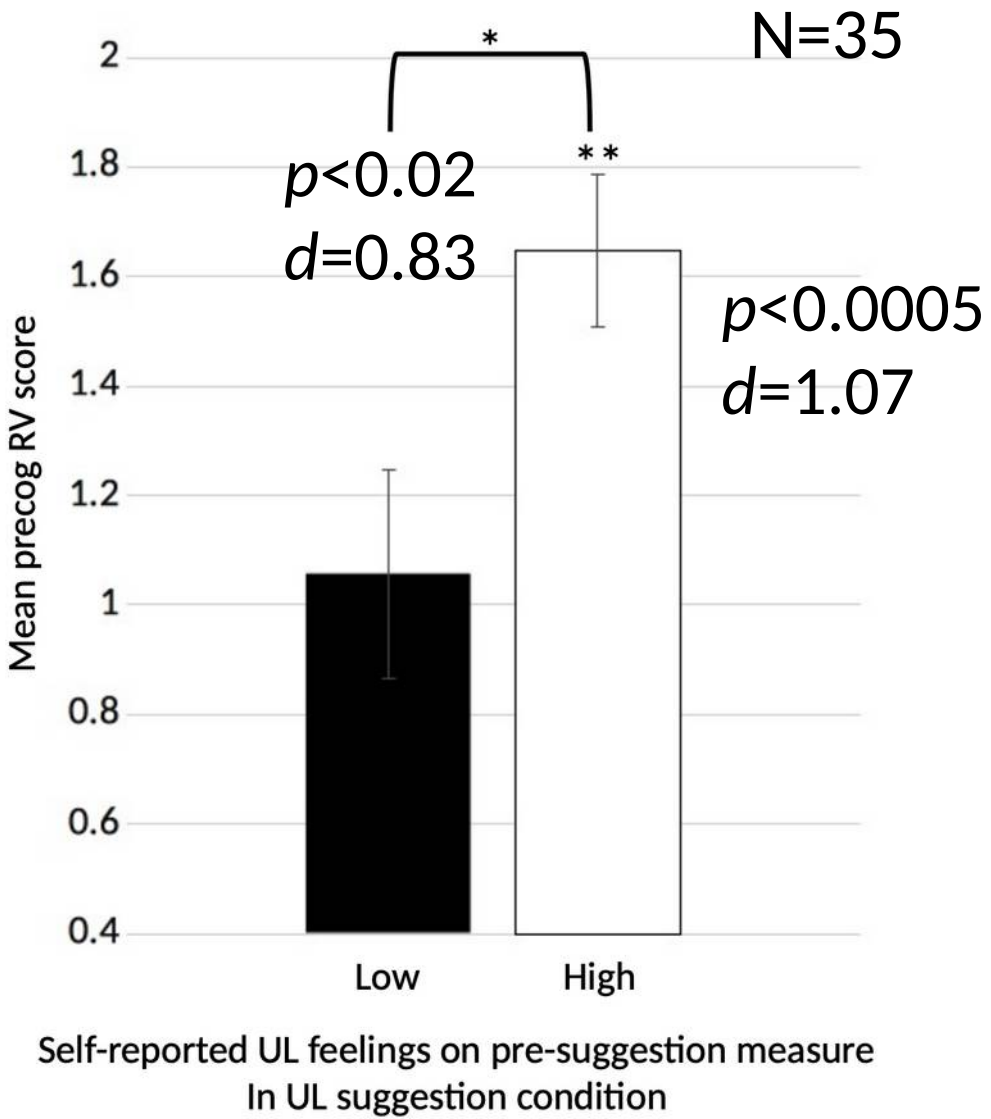
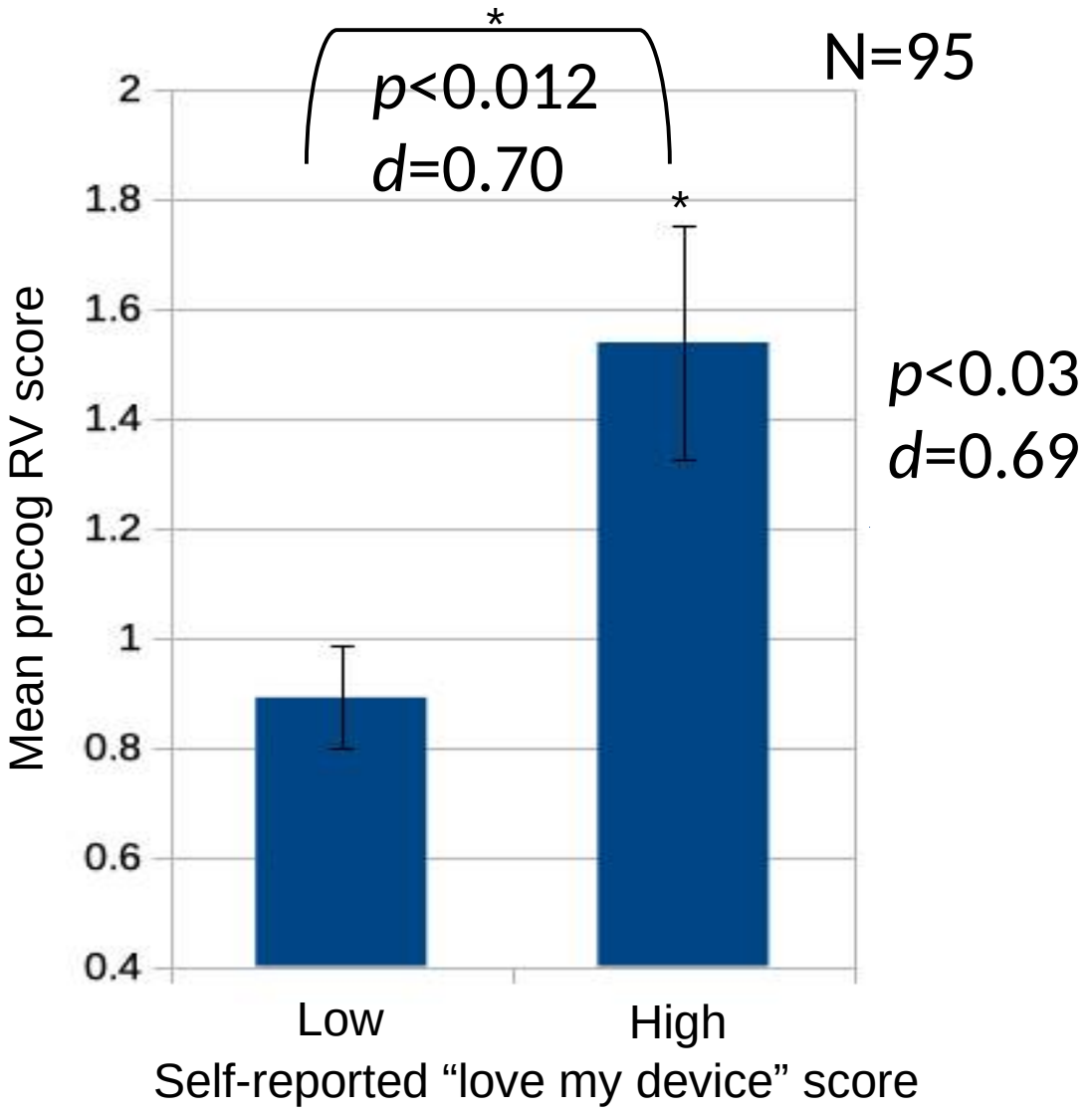
   → Mossbridge, Nisam & Crabtree 2021
   → Mossbridge & Boccuzzi, in prep


N=35
*
**
p<0.02
d=0.83
p<0.0005
d=1.07
Mean precog RV score
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
Low
High
Self-reported UL feelings on pre-suggestion measure
In UL suggestion condition


*
p<0.012
d=0.70
N=95
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
*
p<0.03
d=0.69
Mean precog RV score
Low
High
Self-reported “love my device” score

Confirmed results from precognitive RV

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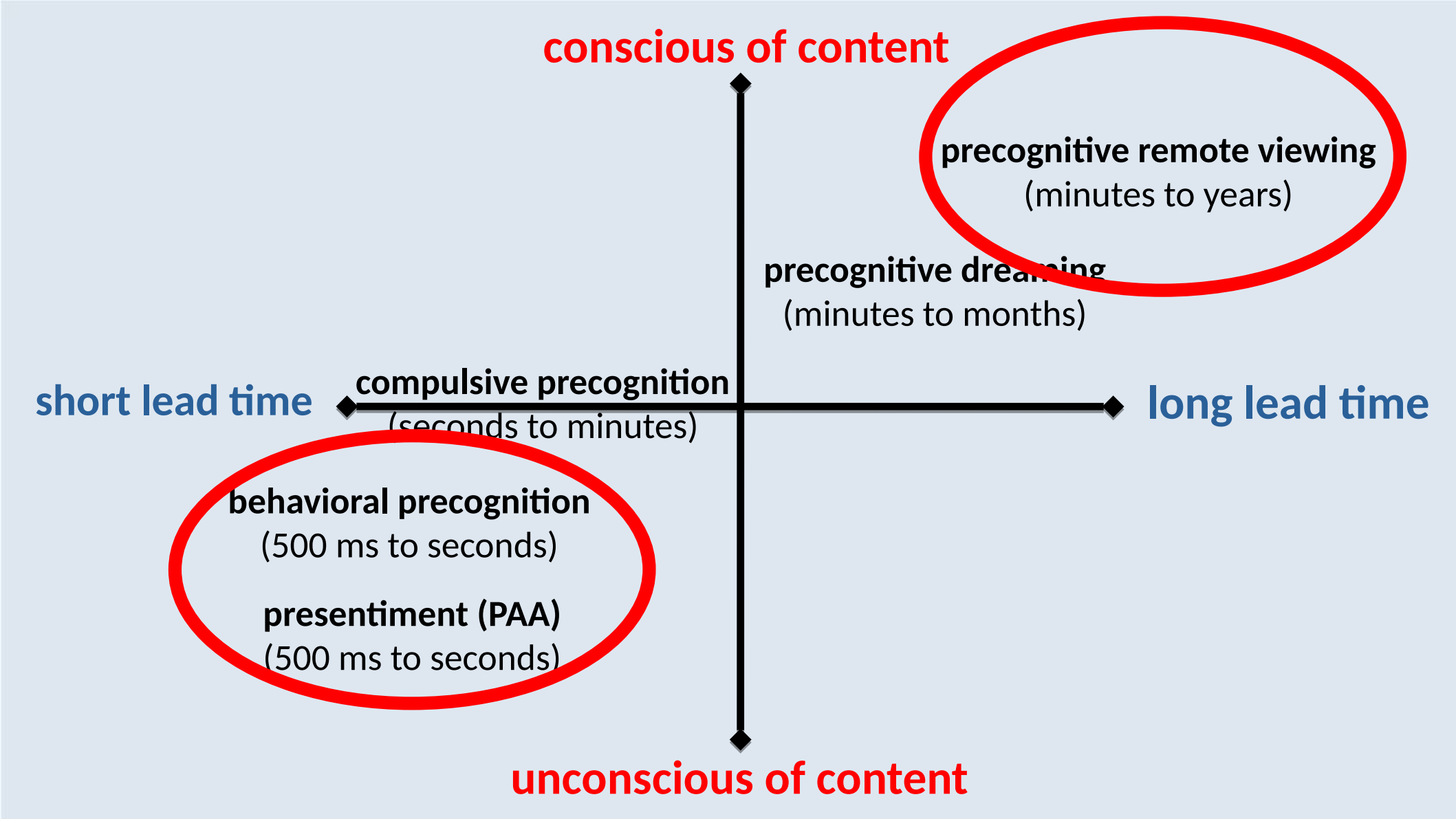
3. Feedback may not be necessary ✓
4. Greater accuracy on interesting/meaningful targets ✓
5. Better performance when in a good/expansive mood ✓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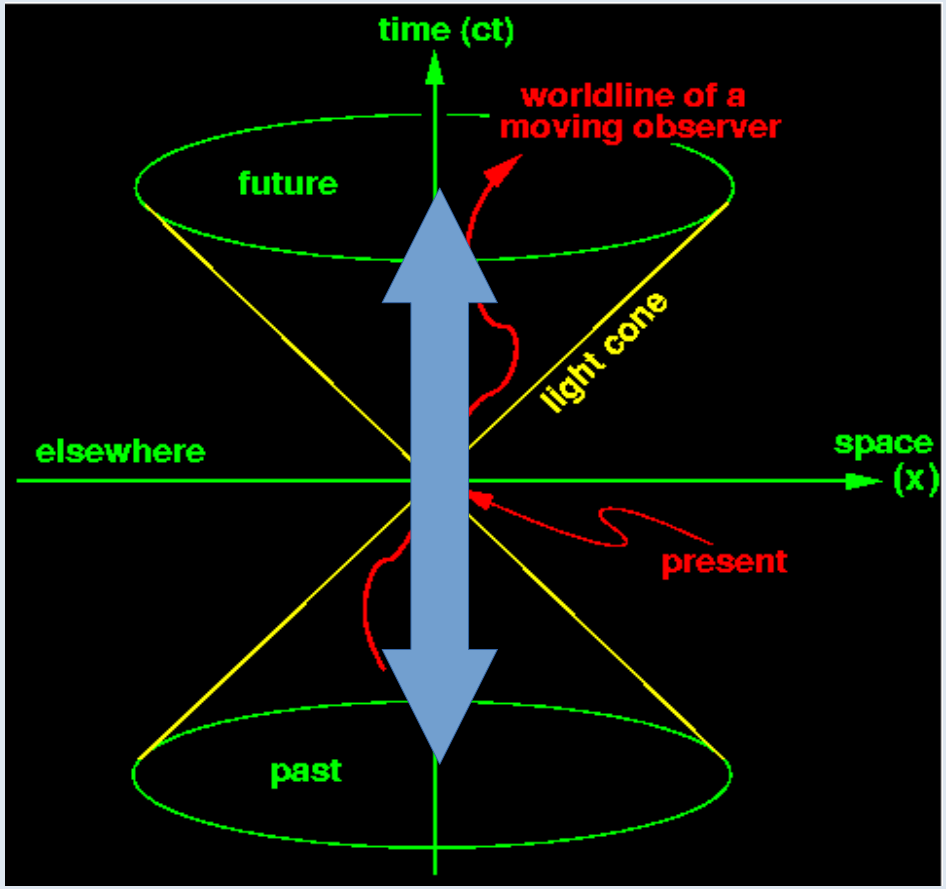
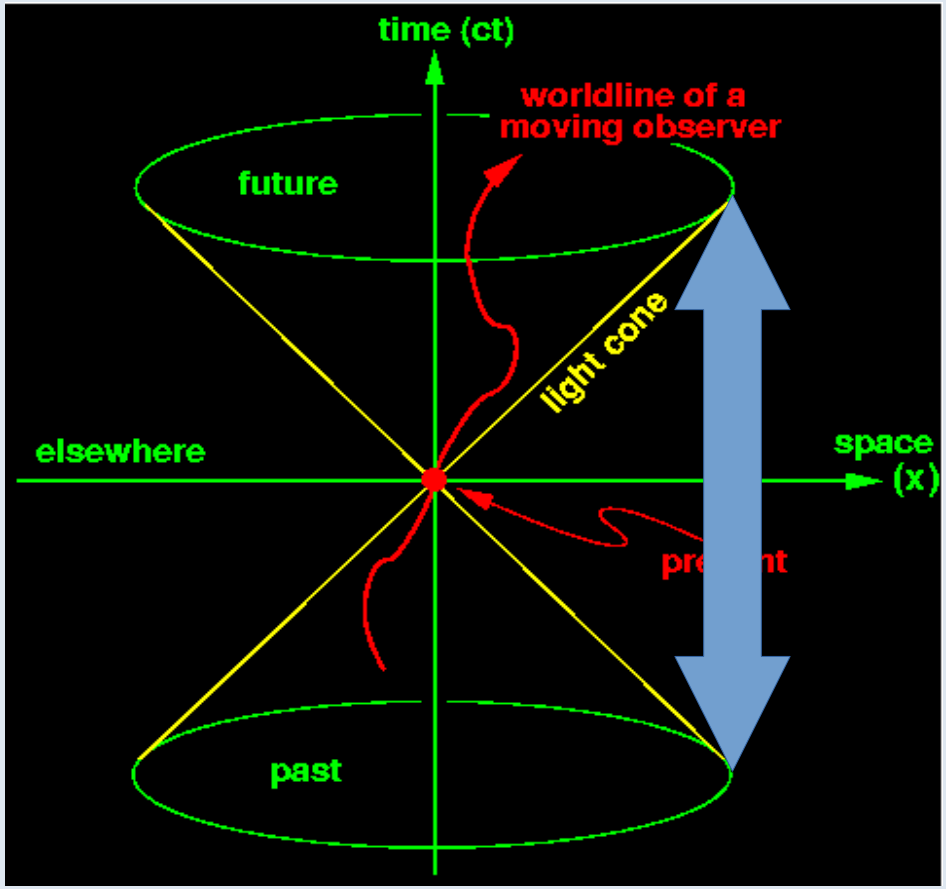
Two mechanisms?

Feature	Presentiment/Behavioral precog?	Precognitive RV?
Conscious?	Mostly NO	YES
Gender difference?	YES	NO
Feedback required?	Mostly YES	Probably NO
Long time frame?	NO	YES
Interesting targets help?	For emotional vs. neutral only	YES
Love helps?	Probably NO	YES



“Time reversal” within the light cone = presentiment, behavioral precognition

“slogging through spacetime”



Observing with mind outside light cone

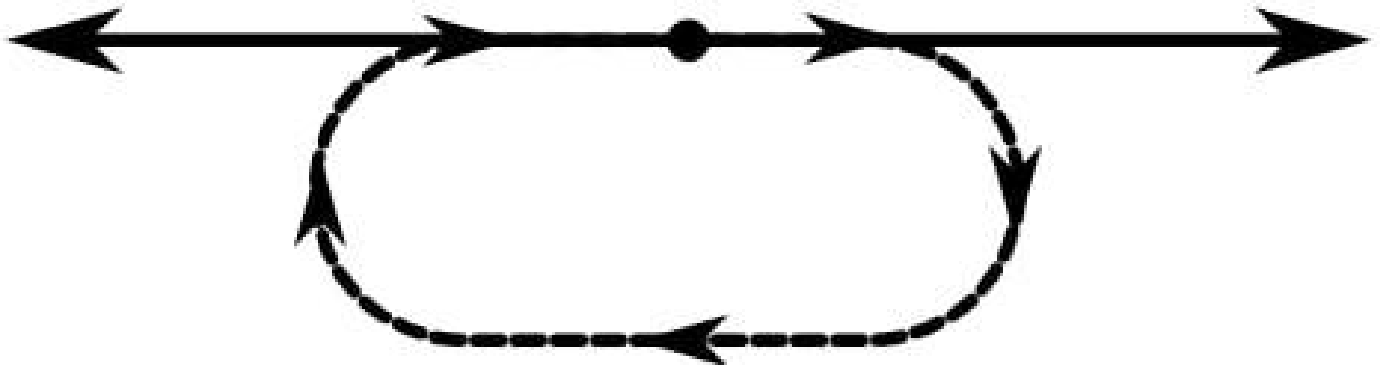
“jumping into/out of spacetime”

precognitive remote viewing

PAST
(mind/brain)

PRESENT

FUTURE
(mind/brain)



presentiment & behavioral precognition
(brain/body)

LinkedIn: **Julia-Mossbridge**

TILT: The Institute for Love and Time
www.LoveAndTime.org (501c3 charity)

Recent Talk at SXSW:
tinyurl.com/PrecogIntelligence

Precog Papers:
tinyurl.com/PrecogPapers2022

THANK YOU!

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All participants

PsiQ/3 Hackation volunteers

Theresa Cheung

Northwestern Research Team

IONS Research Team

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Arnaud Delorme, Cameron Boehmer, and Mikey Siegel

Hibbsco Ltd.

Geoff and Leslie Oelsner

The Jim and Christina Grote Hummingbird Foundation