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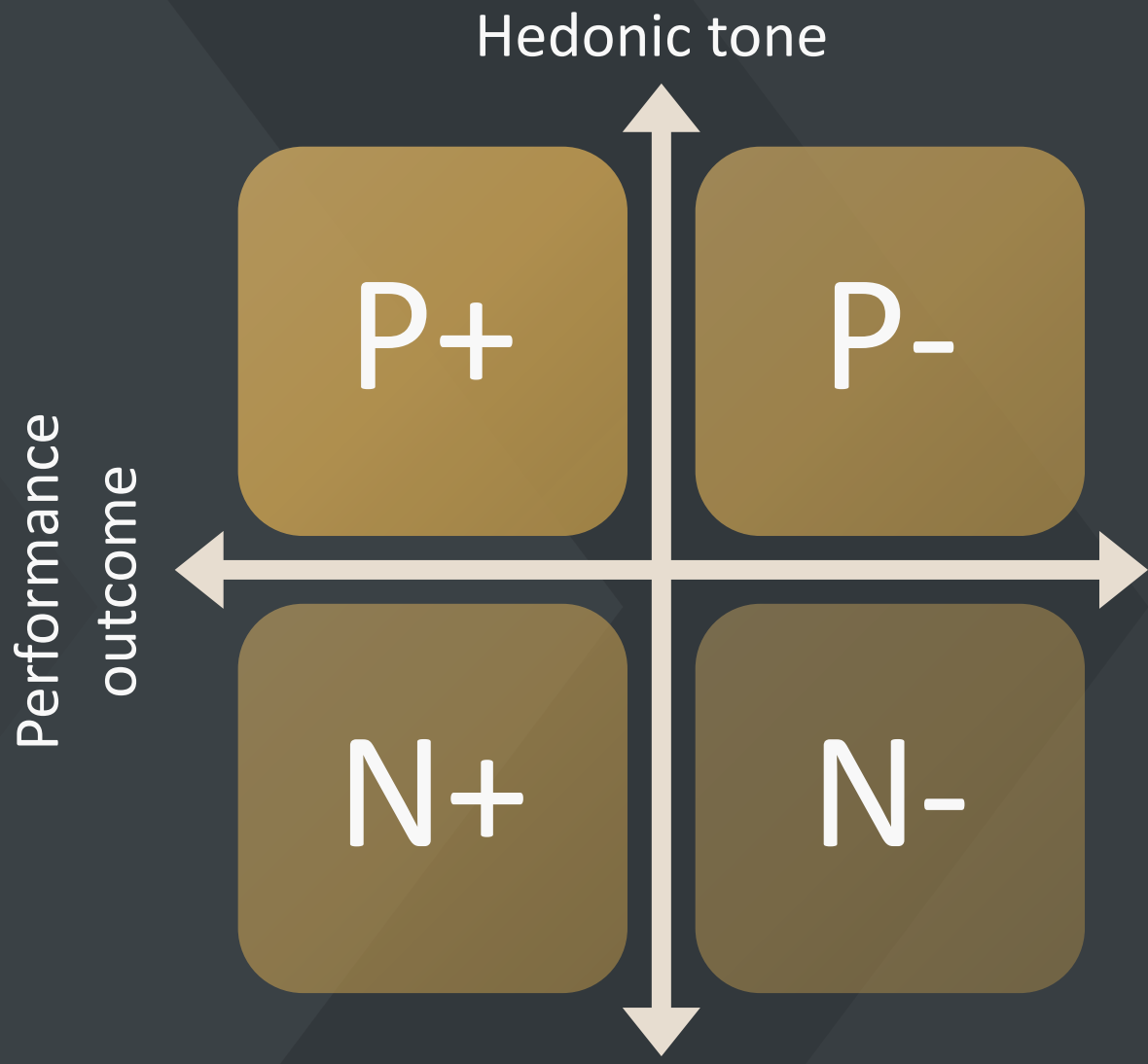
# The Individual Zone of Optimal functioning (IZOF) in sports



Hanin, 2000

# Two dimensions of emotions

Better performance when there is a positive balance between functional emotions (P+, N+) and dysfunctional emotions (P-, N-).



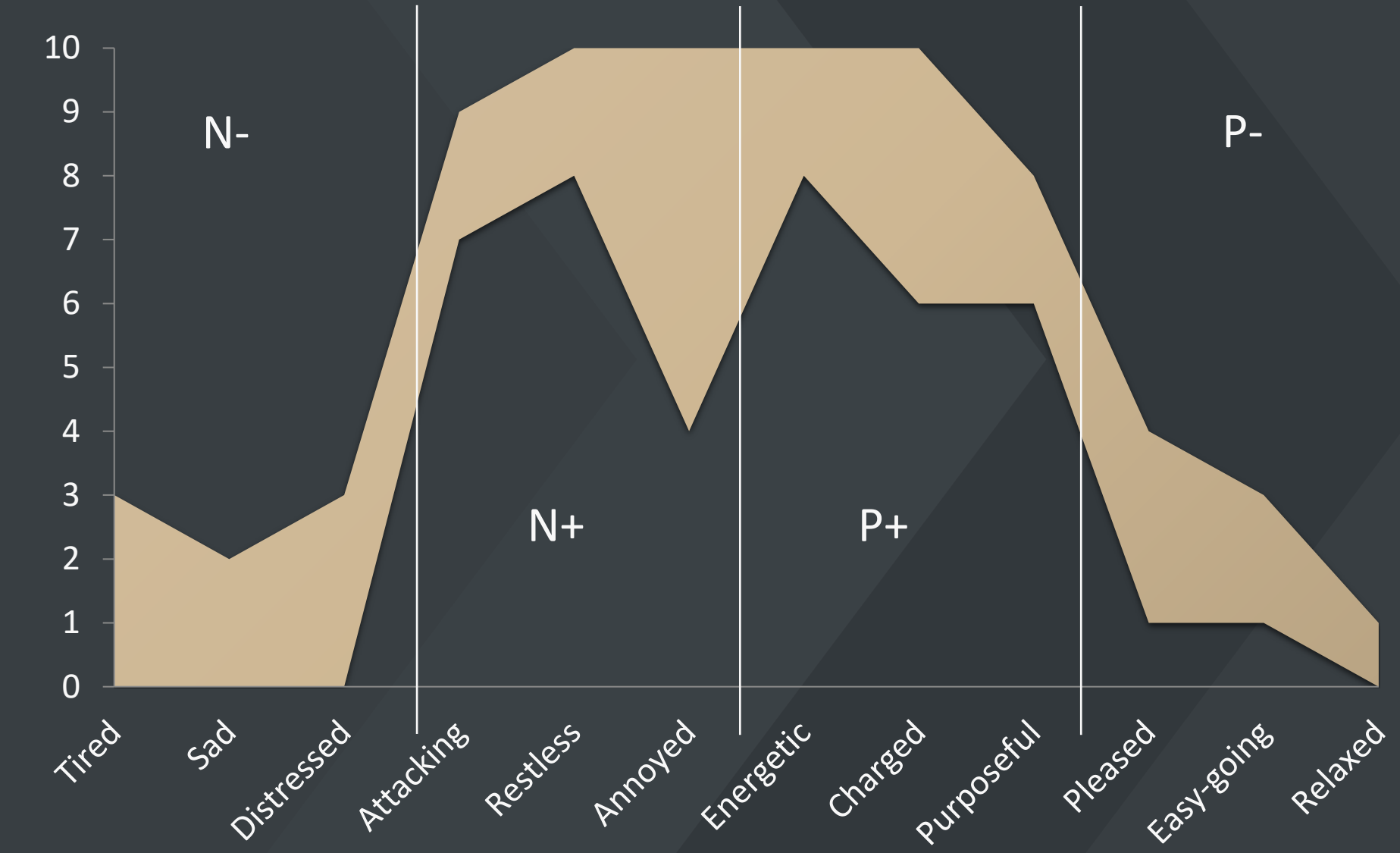

Hanin, 2000

# The IZOF model

| | |
|---|---|
| Individual | Both between players and between situations |
| Zones | Emotions are functional within a certain zone |
| Optimal functioning | Optimal performance will happen when an athlete is in the zone |

Hanin, 2000

# IZOF-profile




Pellizari et al. 2011

# Research questions

| | |
|---|---|
| Describe | What is the relationship between emotion and performance? |
| Explain | Does every athlete have an individual emotional profile? |
| Predict | Do the zones predict performance? |

# Research hypotheses

| | |
|---|---|
| Describe | High functional and low dysfunctional emotions will lead to good performance |
| Explain | Every athlete has an individual emotional profile |
| Predict | The closer to his/her individual zone an athlete is, the better performance will be |

# Individualized Emotional Profiling

Pick emotions out of a list, or come up with your own

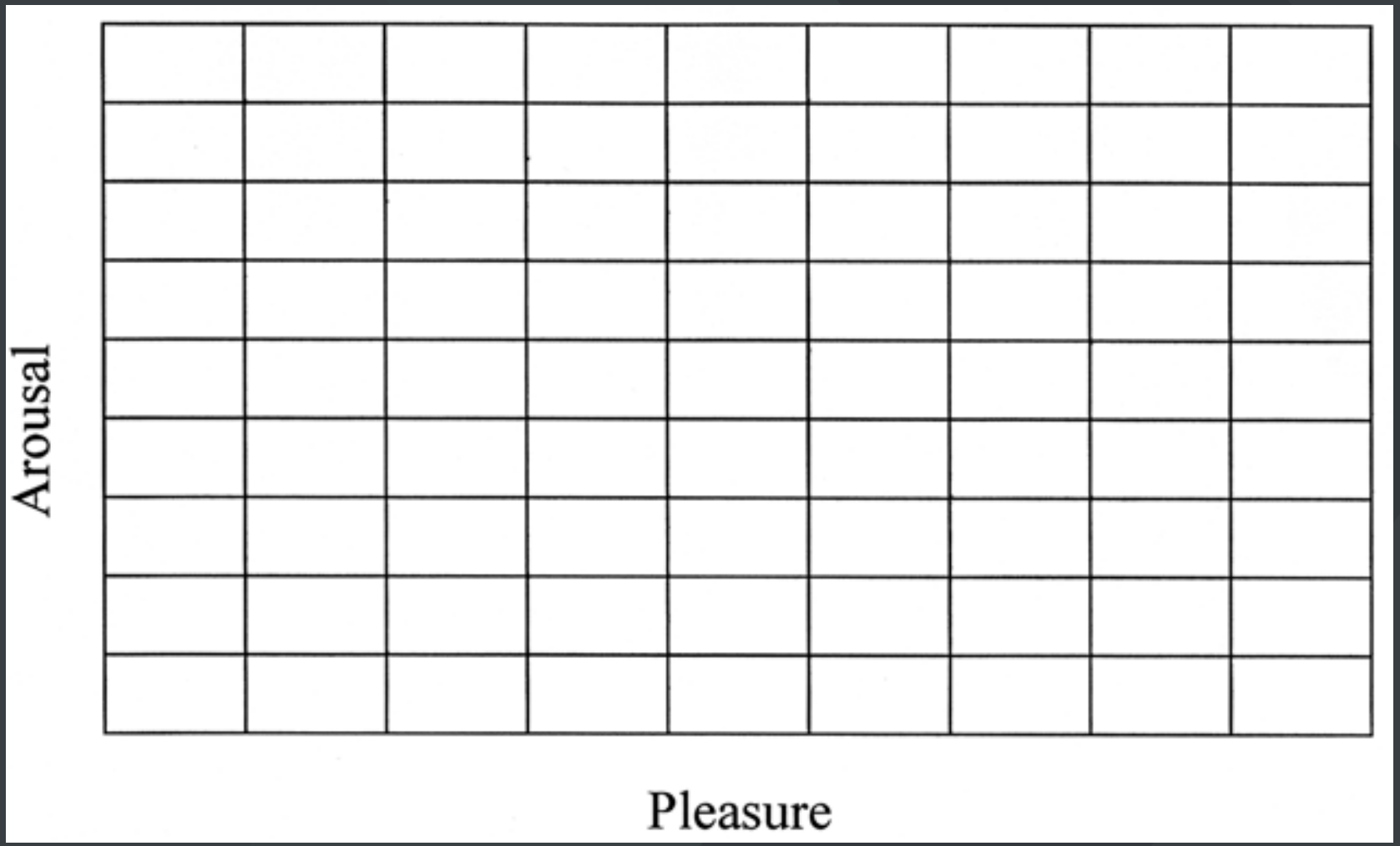
Rate the level of these emotions during optimal performance

Make the IZOF-profile



e.g. Robazza et al., 2004a, 2004b, 2008; Ruiz & Hanin, 2014, Pellizzari et al. 2011

# Affect grid



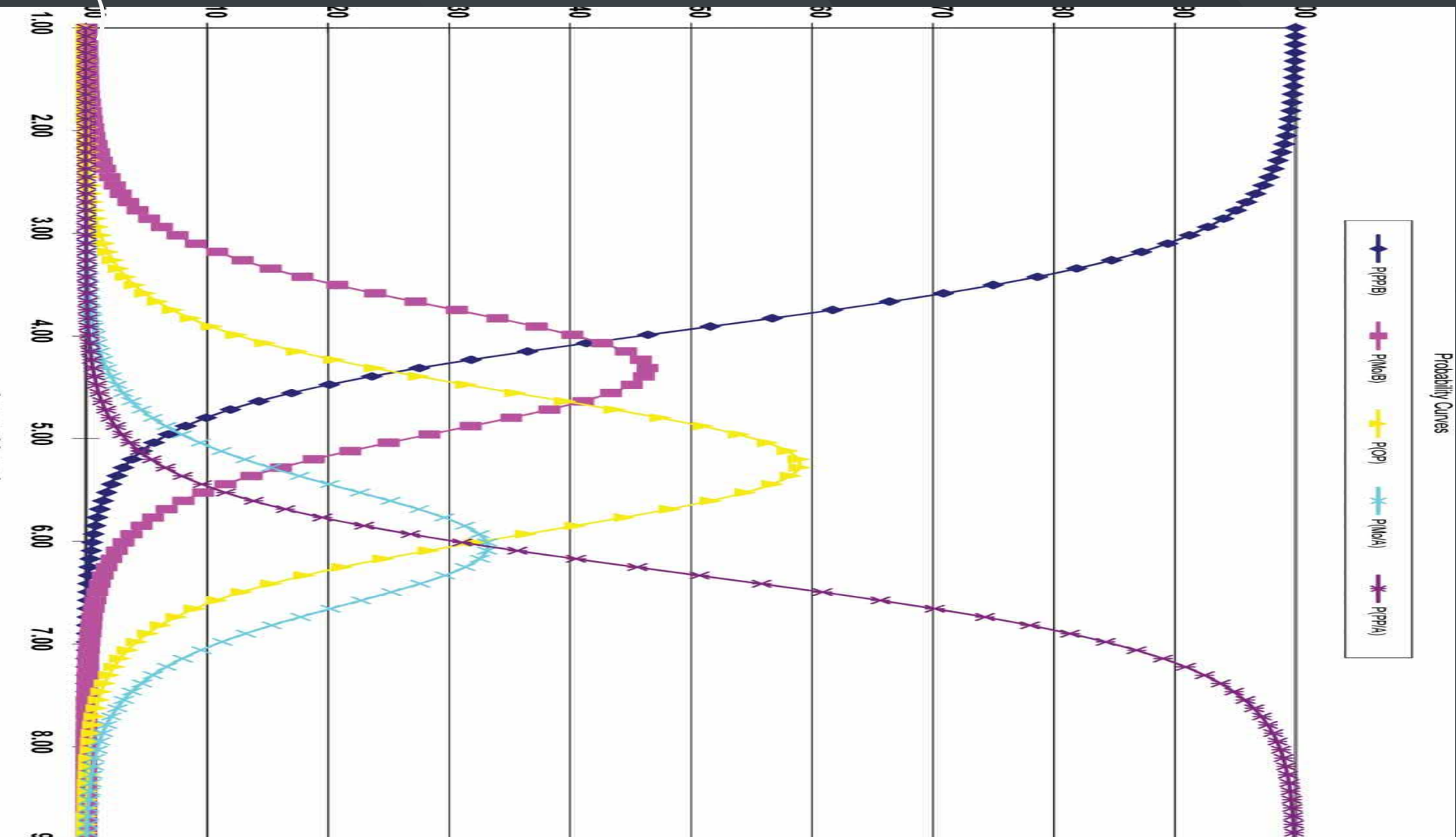



Russell, Weiss, & Mendelsohn, 1989

# Probabilistic IZOF model

Kamata et al. 2002
Tenenbaum et al. 2013

## Individual affect-related performance zones (IAPZ)



Emotion-performance relationship

IZOF-model 2011-2016

IAPZ's 2002-2016

# Choice of studies

Total of 23 studies

8 IEP studies

11 affect grid studies

4 theoretical papers

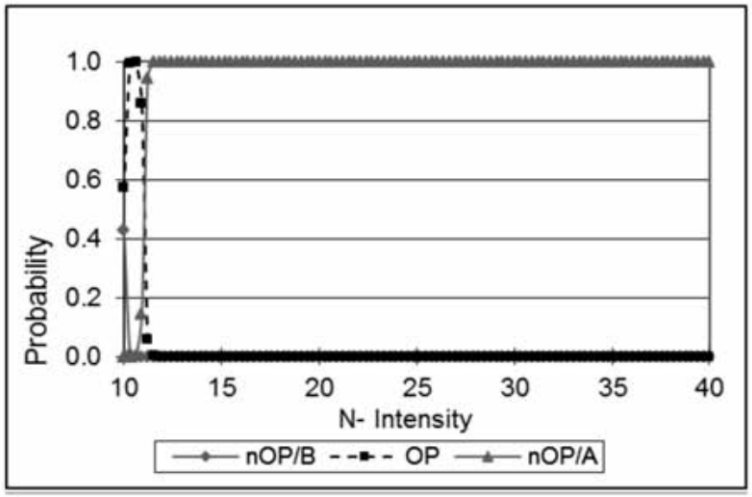
# Emotion-performance relationship

HIGH FUNCTIONAL AND LOW DYSFUNCTIONAL EMOTIONS WILL LEAD TO GOOD PERFORMANCE

Total of 9 studies congruently reported on the relationship

*"When athletes experienced a low intensity of dysfunctional emotions (pleasant or unpleasant) and a high intensity of optimal emotions (pleasant or unpleasant), they tended to perform successfully"* Pillizari et al. (2011)

# Example: Interactive effect

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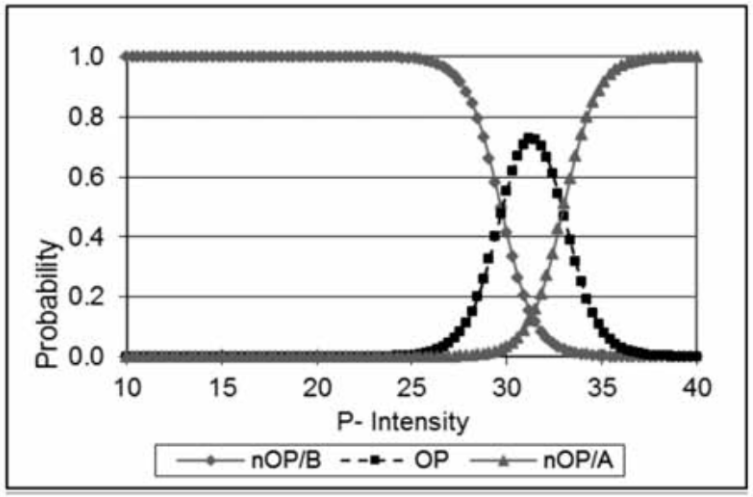


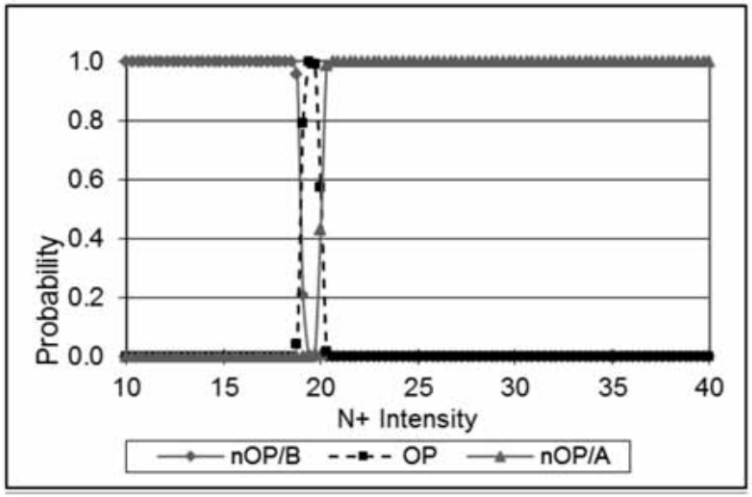


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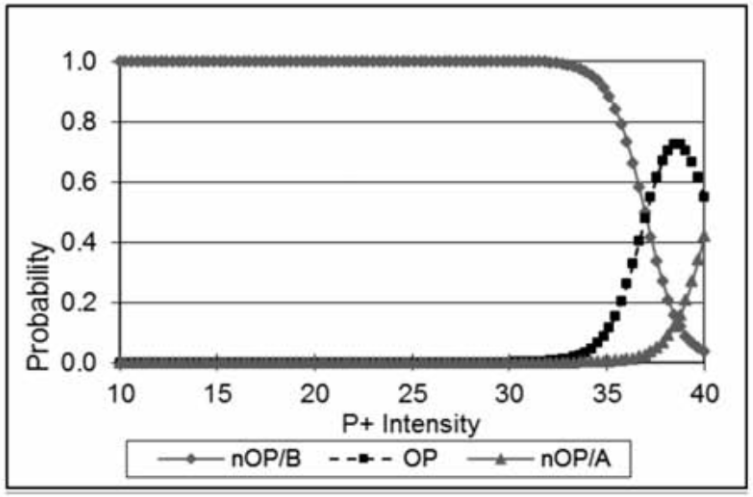




Ruiz & Hanin, 2014

# Idiosyncratic

EVERY ATHLETE HAS AN INDIVIDUAL EMOTIONAL PROFILE

Total of 11 studies congruently reported on the relationship

*"Each archer possessed unique levels of arousal, pleasure, and HR linked to optimal and non-optimal performance for every situation"* (Filho & Moreas, 2008)

# Example: Golf putt and swing

3 NCAA I male golfers

IAPZ's for both putt and swing

5 performance levels

Affect grid



Van der Lei & Tenenbaum, 2012

# Example: Golf putt and swing



Van der Lei & Tenenbaum, 2012

# Predicting performance

THE CLOSER TO HIS/HER INDIVIDUAL ZONE AN ATHLETE IS, THE BETTER PERFORMANCE WILL BE

Total of 6 studies congruently reported on the relationship

*"The athlete's Optimal IAPZ ranges for her arousal and pleasure dimensions resulted in higher probabilities of an optimal performance"* (Johnson et al., 2007)

# Example: Tennis performance

| Profile category | Rank | Accuracy |
|---|---|---|
| pIZOF PF | 1 | 73.3% |
| Trigger 2 | 1 | 71.4% |
| Trigger 1 | 1 | 71.1% |
| Trigger 3 | 4 | 67.6% |
| pIZOF UF | 5 | 63.4% |
| pIZOF UD | 6 | 60.2% |
| pIZOF PD | 7 | 56.9% |
| Trigger 4 | 7 | 55.7% |
| Recall PF | 9 | 50.8% |
| Recall UF | 10 | 41.3% |
| Recall UD | 10 | 36.4% |
| Recall PD | 12 | 30.3% |

10 male NCAA I Tennis players

IAPZ profiles

4 performance levels

IEP

Flett, 2014

# Conclusions

- Describe
  N = 9
  Low dysfunctional and high functional emotions are related to optimal performance
- Explain
  N = 11
  Every individual athlete has an unique IZOF-profile for every separate situation
- Predict
  N = 6
  IAPZ profiles provide a strong prediction of performance

# Applicability problems

Total amount of participants in this literature review is 146

> Emotion-performance relationship of a 146 people in a 146 situations

Elite athletes are necessary since amateurs are not stable enough (Calmeiro & Tenenbaum, 2007)

> Limited applicability in sub-elite settings

Most studies based on emotion recall (e.g. Cottyn et al., 2012; Robazza et al., 2008)

> The performance outcome can influence the perception of emotions

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