

Hacking the stress system: the stress response as an adaptive trait that can work for or against you

IV - On the intersection between culture and stress

### Life-threatening and social stress

- Acute life threatening stress
  - Fight or flight response
- Social stress
  - Social standing and position in the hierarchy
  - Challenges to reproductive success

# How our stress differs from most other mammals I: Anticipation

- If you can turn on the stress system before a stressor arrives, you are even quicker.
- Hyperactive Agency Detection
  - Its better to get scared a 100 times for nothing, than not have a stress response when you really need it.
- Theory of mind
  - The anticipation of intention
  - 5<sup>th</sup> degree

Lisdorf, A. (2004). What's HIDD'n in the HADD?-A cognitive conjuring trick? *Birot.Hu*, (January 2006), 5-7. https://doi.org/http://dx.doi.org/10.1163/156853707X208549 Bering, J. M. (2002). The existential theory of mind. *Review of General Psychology*, 6(1), 3-24. https://doi.org/10.1037//1089-2680.6.1.3

# How our stress differs from most other mammals II: perception

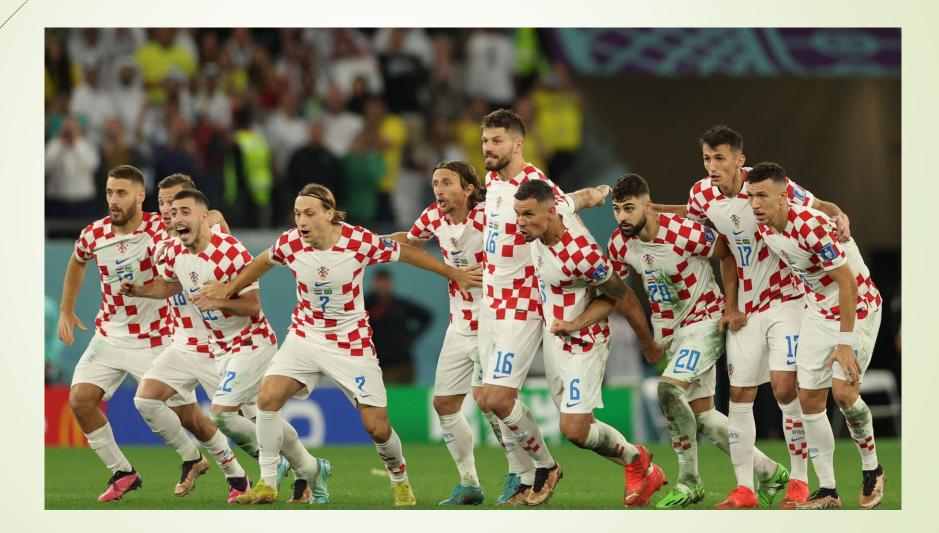
 We have a strong tendency to stress over perceived inadequacies rather than real ones

Beauty ideals

- Happiness & success
- Social media

Frank, R. H. (2016). Success and luck: good fortune and the myth of meritocracy. Princeton, Oxford: Princeton University Press. Lin, R., & Utz, S. (2015). The emotional responses of browsing Facebook: Happiness, envy, and the role of tie strength. Computers in Human Behavior, 52, 29–38. https://doi.org/10.1016/j.chb.2015.04.064 de Lima Bastos, P. A., & Pessoa, R. R. (2019). A discussion on english language students' body image: Beauty standards and fatness. Profile: Issues in Teachers' Professional Development, 21(1), 13–26. https://doi.org/10.15446/profile.v21n1.69603

#### Retrospective stress appraisal: did we win?



## How our stress differs from most other mammals III: Duration

- We turn on the stress system for much longer than any other animal
  - Many of the stress related problems we know derive from this ability to be stressed for much longer than any other animal



# How our stress differs from most other mammals IV: Projection

- We have the unique ability to project our stress on other beings
  - Other people, even those we do not know
  - Animals
  - Fictional characters



## Agriculture, population growth and specialisation

- You need a food surplus for some to specialise in other fields than food production.
  - Political class
  - Religious class
  - Warrior class

- Problems with population growth and available land
  - Who inherits?
  - What do you do with the rest?

## Culture as an emergent property of circumstance

What we eat

Where our culture develops

#### The cortex & ingroup function.

#### Dunbar's number (+/- 150)

- Larger groups require
  - Formal leadership
  - Codified barter

Dunbar, R. (2010). How Many Friends Does One Person Need? Cambricge: Harvard University Press.



#### Culture and social support

- Growth, support and initiation
- How much time does mom invest in you in your first days
- How strong are the social bonds in your group



Pourmand, V., Lawley, K. A., & Lehman, B. J. (2021). Cultural differences in stress and affection following social support receipt. *PLoS ONE*, 16(9 September), 1–17. https://doi.org/10.1371/journal.pone.0256859 Francis, D. D., & Meaney, M. J. (1999). Maternal care and the development of stress responses. *Current Opinion in Neurobiology*, 9(1), 128–134. https://doi.org/10.1016/S0959-4388(99)80016-6