

# Shoveling in the dark: stress, resilience, and uncertainty

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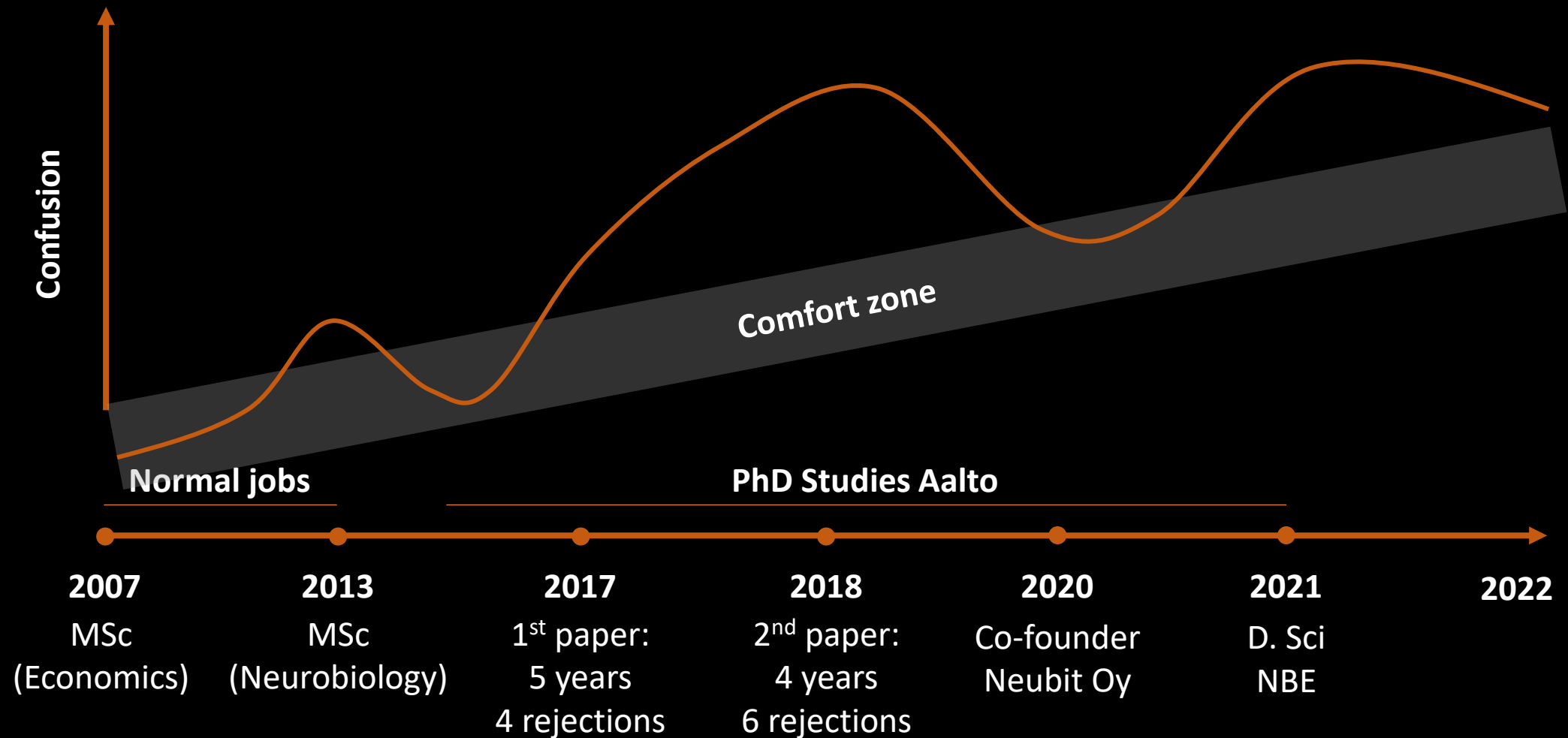
Black Friday, November 2022  
Mordor, Finland



Illustrations: DALL-E



# My credentials



# Why shoveling in the dark?

## What this talk is NOT about:

- 10 simple rules how to deal with stress
- superhuman hacks to endure stress



## What it IS about:

- Staying sane while pursuing your long-term goals and dealing with uncertainty
- Providing information, not advice
- More aware -> more in control

**Stress response system is essential for survival and adapting to uncertainty**

# Outline

- Overview of the physiology of stress
- Displaced activity: Behavior under stress
- Uncontrolled stress and learned helplessness
- Resilience 101:
  - Preparing for the unpredictable
  - Being naughty: reclaiming control
  - Being connected: social safety nets



# Definitions of stress

## Common tongue:

- demanding, sometimes **overwhelming**, state, associated with **negative** emotions

## Biology (“general adaptation syndrome”):

- non-specific **adaptive reaction** to novel, unexpected, or threatening events
- ongoing process of **assessing** the environment to **anticipate** challenges, and **cope** with them

## Psychology:

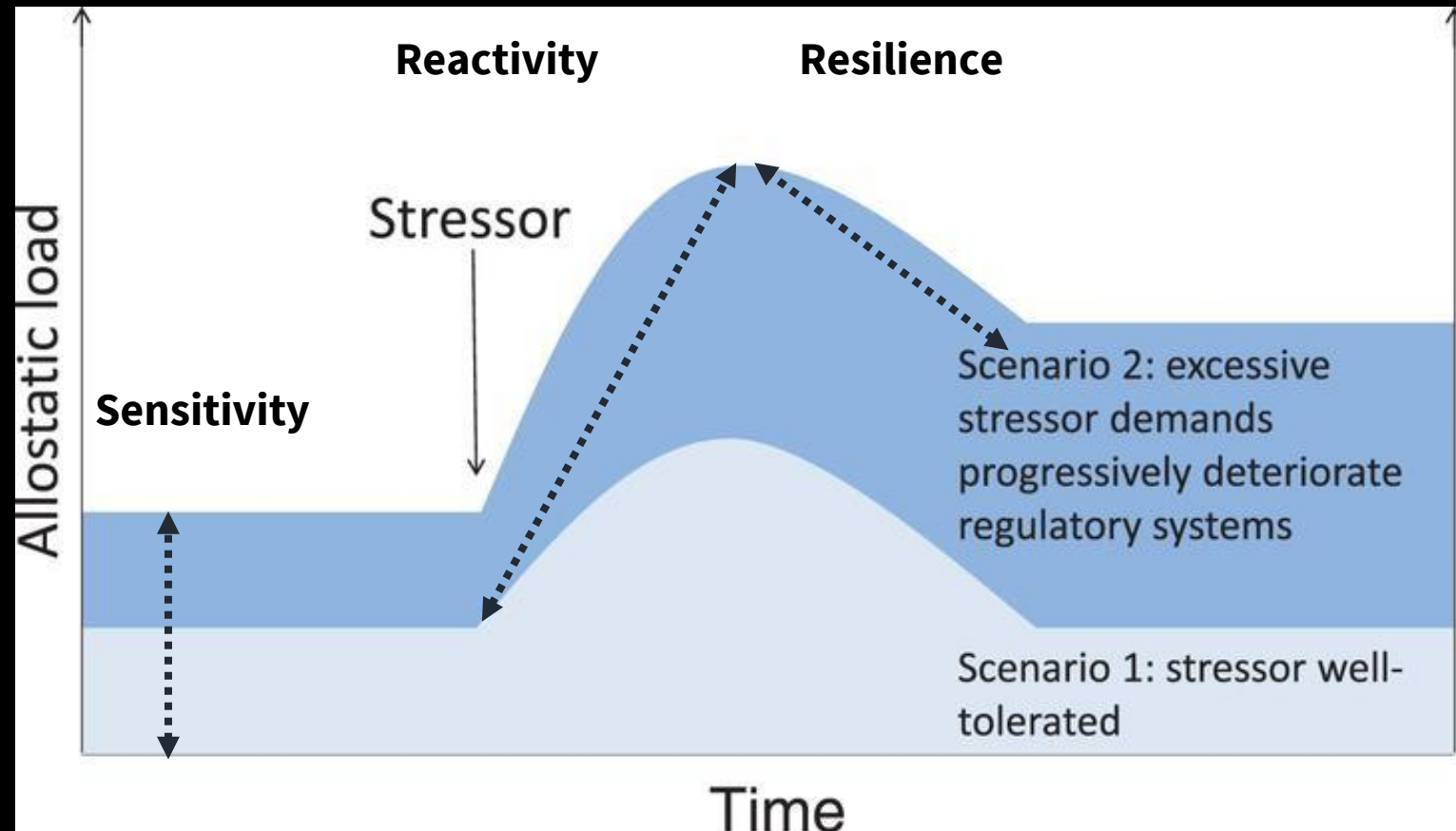
- disturbance of the body’s internal balance in response to a **perceived** threat, including the **threat of some essential need being denied**
- withdrawal of **emotional connection** or **psychological safety**

# Sensitivity, reactivity, and resilience

Cost of adaptation to return to homeostasis

- Sensitivity – intensity of stressor needed to produce a response
- Reactivity – how strong is a reaction to stressor
- Resilience – is the time to go back to normal state

Chronic stress affects resilience by weakening the negative feedback system



# Stress response in the body



## Upregulation:

### Behavior:

- Sensory systems
- Selective attention
- Memory
- Motor activity

### Physiology:

- Sympathetic branch of ANS
- Heart rate and efficiency
- Blood flow to the brain, muscles, and lungs
- Glucocorticoids, Endogenous opiates, Oxytocin, Vasopressin
- Blood glucose levels
- Respiration

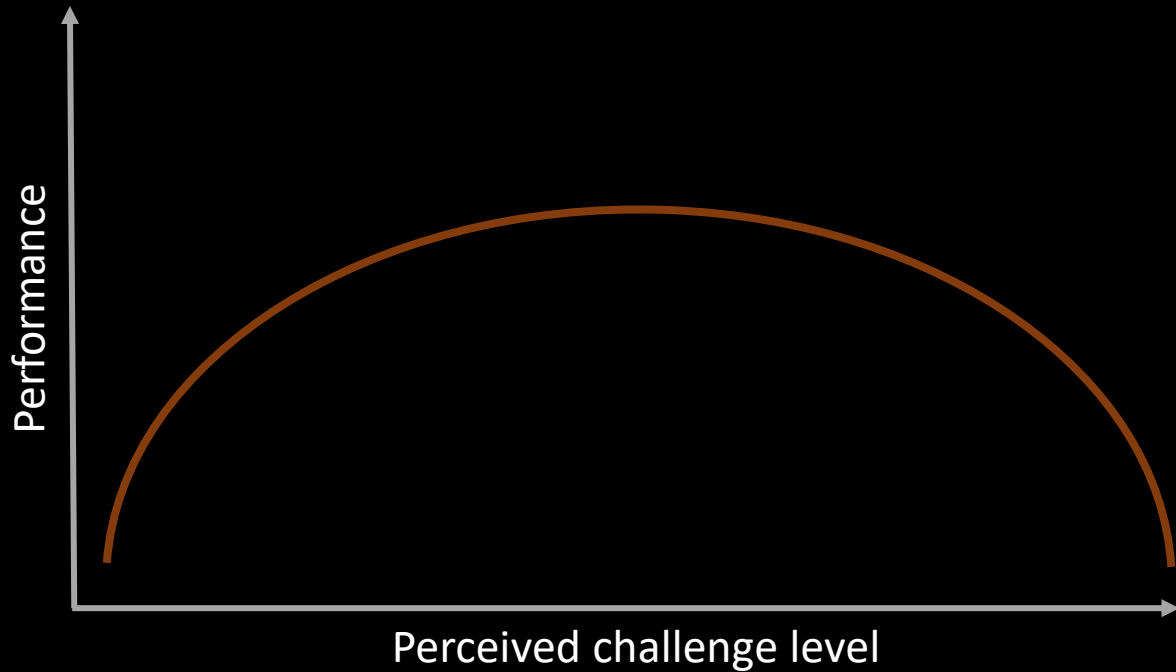
### Downregulation:

- Long-term planning
- Distributed attention
- Less flexibility

- Digestion
- Reproduction
- Immunity
- Recovery
- Growth



# Stress intensity and coping strategies



- Most modern-day stressors require “social engagement” and not “fight or flight” mode
- We need “fight-or-flight” mode to trigger negative feedback mechanism leading to recovery
- To optimally engage the situation needs to be perceived as safe and familiar



None



Moderate:  
social engagement



Strong:  
“fight or flight”

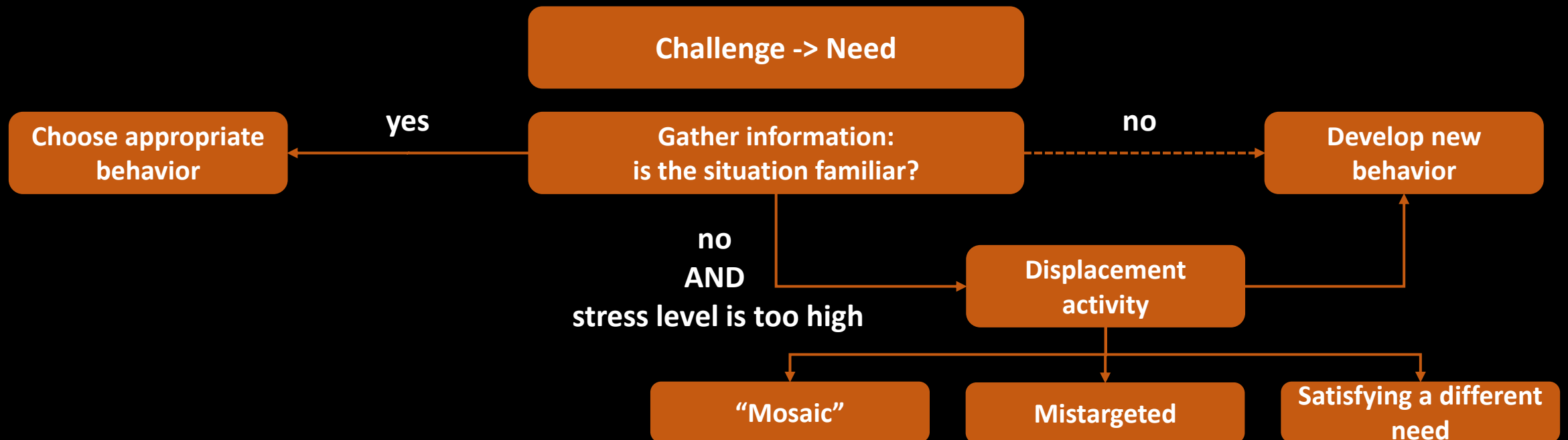


Extreme:  
freezing / dissociation



# Displaced activity

1. Not immediately relevant in the situation
  2. No biological meaning
  3. Specific to the species, in humans – habits
- Main goal – reduce the stress level



# Make the most of your displacement activity



- Notice when you (or others) are stressed
- Build good habits when the times are good, use them when the times are tough
- Expose yourself to novelty and variation: develop responses for wider range of situations
- Preparation: make the situation more familiar



# Uncontrolled stress

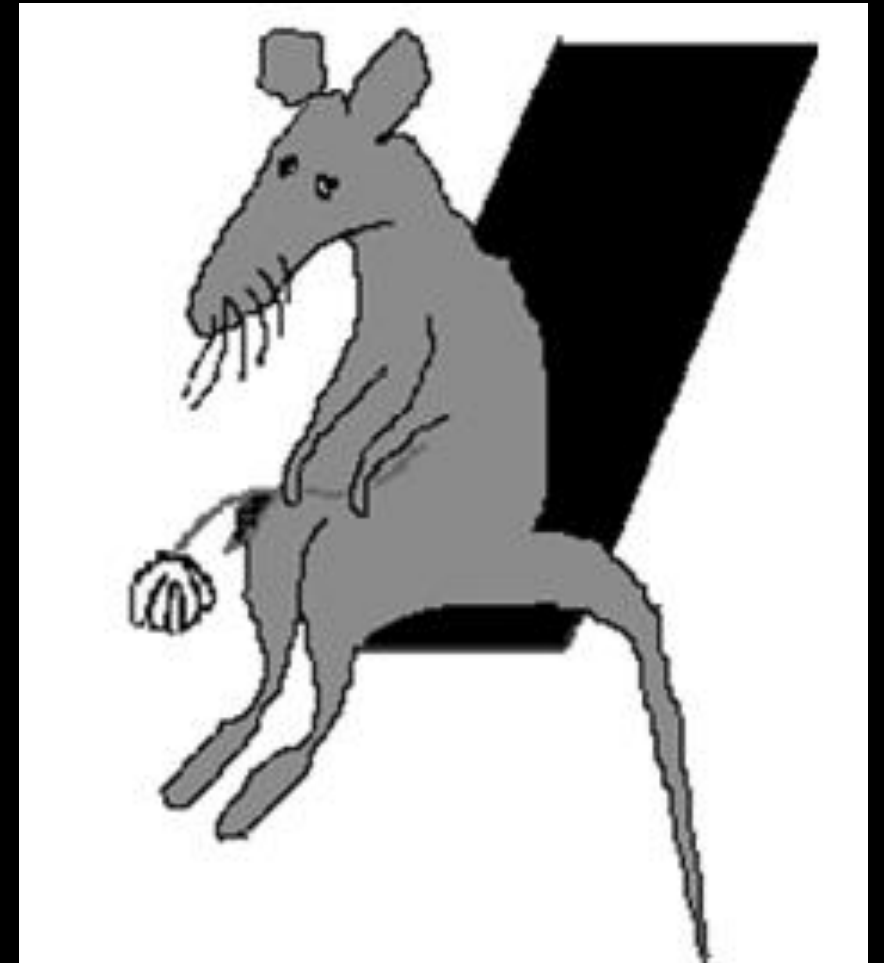
## Impossible to:

- Predict (the beginning or the end)
- Control (adapt to, avoid, or cope with)
- Share (isolation)



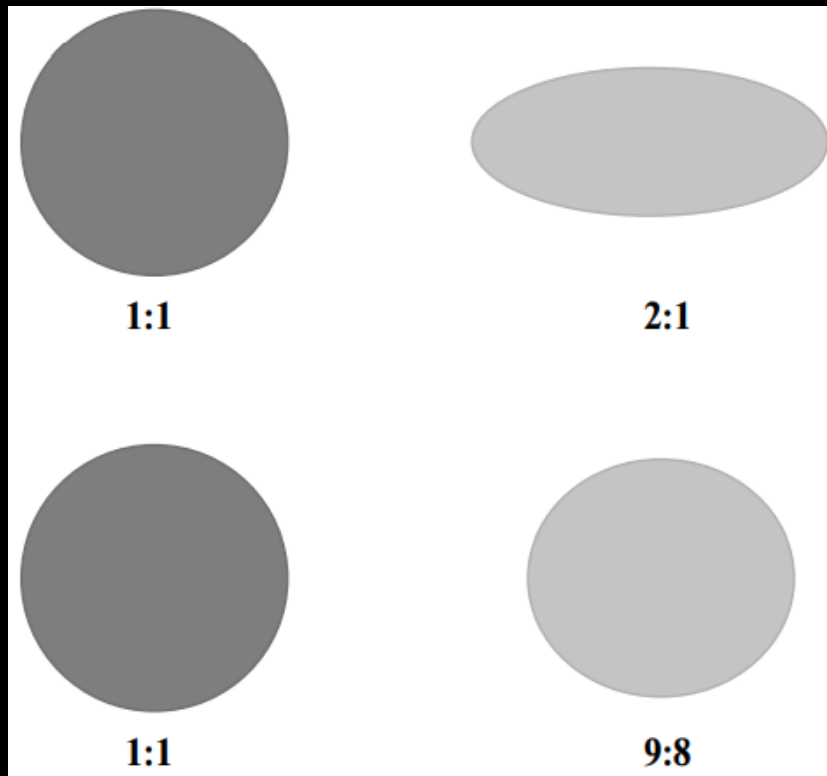
# Learned helplessness

- Learning and other cognitive deficits
- Decreased aggression, explorative, and avoidance behaviors
- Reduced social activity, reduced autonomy (willpower, initiative)
- Highly-stereotyped, inflexible behavior
- Anhedonia
- Neophobia
- Sleep problems
- Weight loss
- Immune suppression

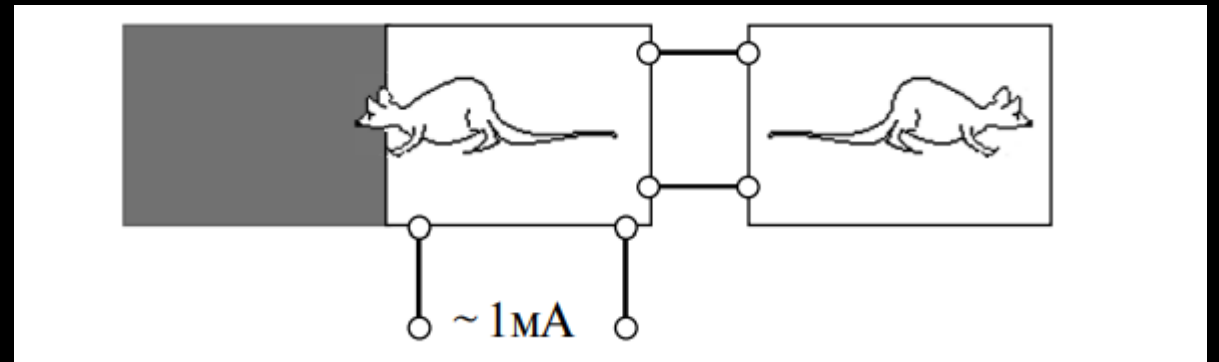


# Learned helplessness

**Example 1: Unpredictable rewards cause uncontrolled stress**



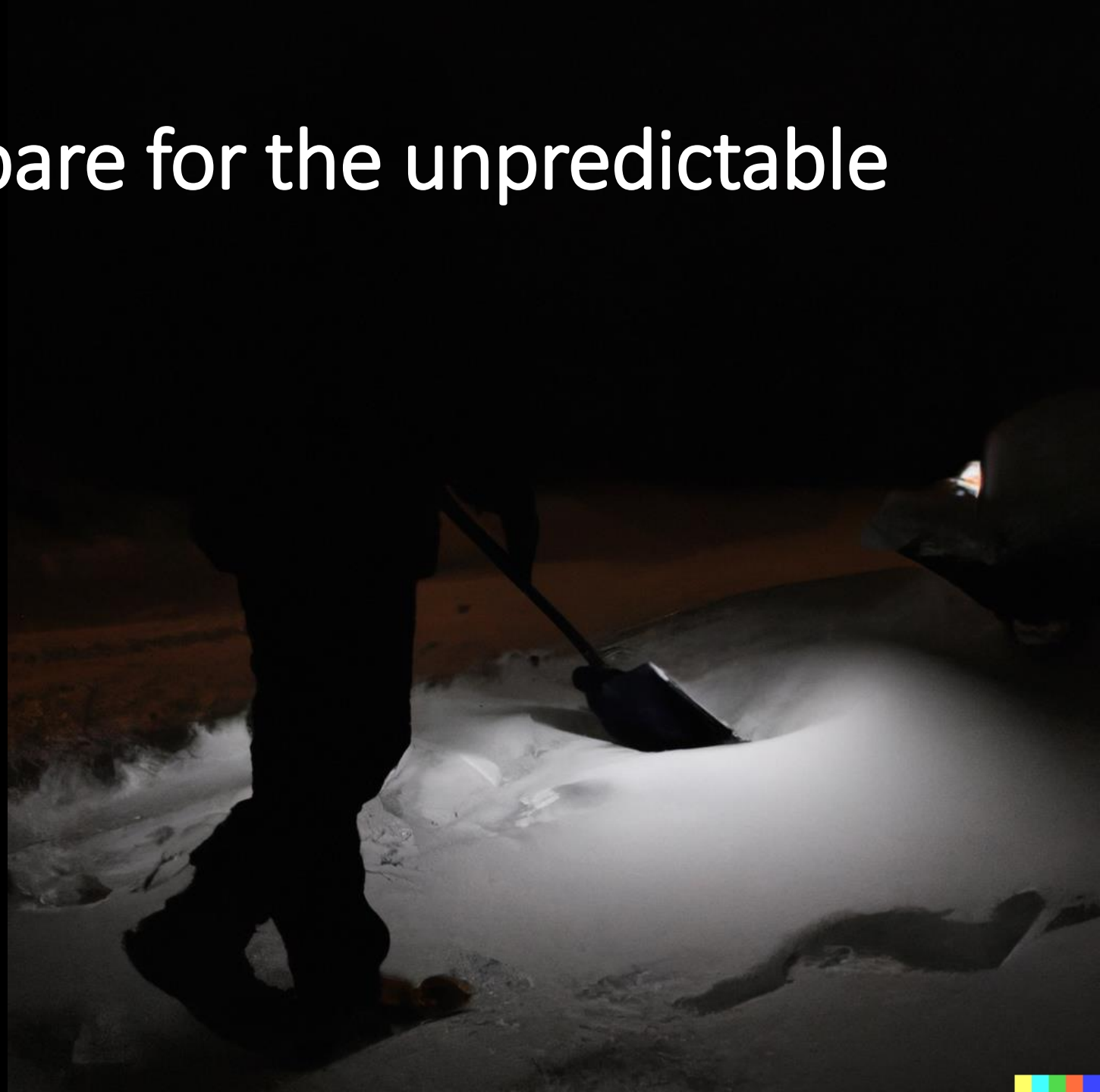
**Example 2: Controllable vs uncontrollable electric shocks**



# Resilience 101: prepare for the unpredictable

- Set internal deadlines
- Consider the plan for the worst-case scenario
- What is the best next step:
  - regardless of how other things turn out?
  - to learn more about the situation?

“There is no way of losing this game. Either you are right, or you learn something new.”



# Resilience 101: reclaiming control

- Stress yourself!
  - Exercise
  - Stick to (a self-imposed) routine
  - Try new things, take risks
  - Be naughty: do everything that's not directly forbidden
  - Express negative emotions
- It is enough to have the feeling of subjective control



# Resilience 101: social safety nets

- Find a community where you don't experience "defeat":
  - Hobbies (the quirrier the better)
- Identify based on values or lifestyle (e.g. green lifestyle)
- Identify with multiple (various) groups of people
- Build your own community (it can be a community of one)



It is not others' expectations and intentions but **our perceptions** of them that serve as the stressor



# Why should I care about stress?

- People tend to ignore their stress until it becomes overwhelming
- Tuning into our stress reactions allows us to:
  - Recognize negative signals, danger signals, and signs of distress in ourselves and others
  - “When one lacks the capacity to feel heat the risk of being burned increases”
  - Consider what is not working, what is out of balance, what are we ignoring?
  - Identify new ways to take care of ourselves
- Not posing those questions is itself a source of stress

# Conclusions

- Get curious about your stress:
  - Notice when you or others are involved in displacement activity
  - Identify the feeling
  - Address the source
- Get intentional about your habits:
  - Why am I doing what I am doing?
  - What makes me feel good?
- Get intentional about recovery:
  - Rest
  - Sleep
  - Fool around

A silhouette of a person standing on a hill, holding a shovel over their shoulder. The background is a dramatic sunset sky with a bright sun low on the horizon, casting a golden glow over the clouds. The person is on the left side of the frame, and the text 'Thank you!' is centered in the lower right area.

**Thank you!**