How to Dance: limits of human mobility
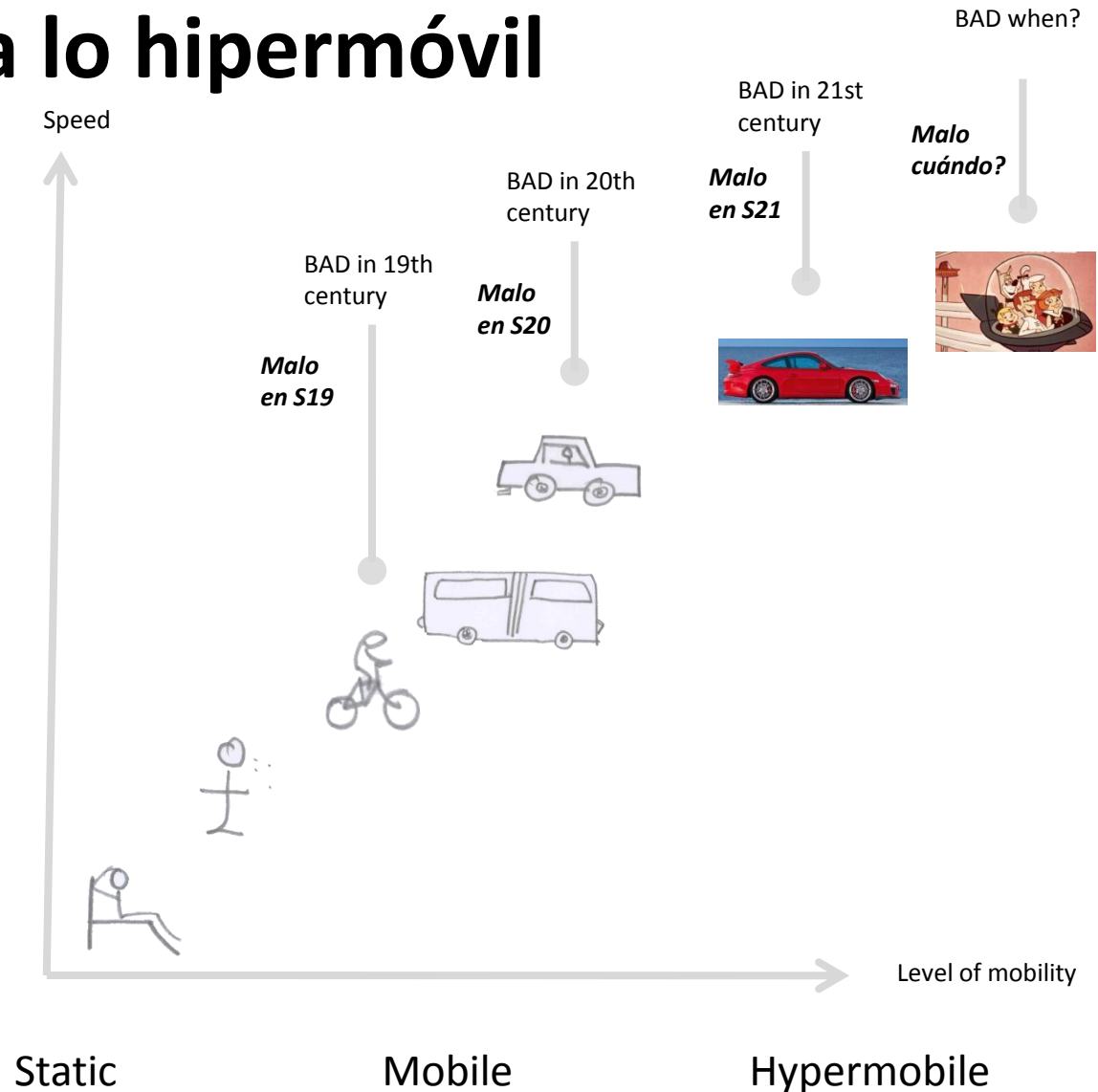

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From static to hypermobile
De lo estático a lo hipermóvil

despacio

- What does it mean to be "mobile" today?

(¿ qué significa ser "móvil" hoy en día?)

- What does it mean to be "hypermobile"?

(¿Qué significa ser "hipermóvil"?)

- When does speed become bad?

(¿Cuándo se vuelve mala la velocidad?)

Speed

BAD when?

BAD in 21st century

Malo cuándo?

BAD in 20th century

Malo en S21

BAD in 19th century

Malo en S20

Malo en S19

Level of mobility

Static   Mobile   Hypermobile

Limits of human perception

- The limits of human perception are defined by our **bodies**:
  - On a clear, dark night we can see a candle flame 3.6 miles away
  - The human nervous system can process 110 bits of info per second,
  - A person can respond in 100 msecs to a signal

  - In traffic: "Two second rule": a driver can be safe if they stay 2 seconds away from the vehicle ahead
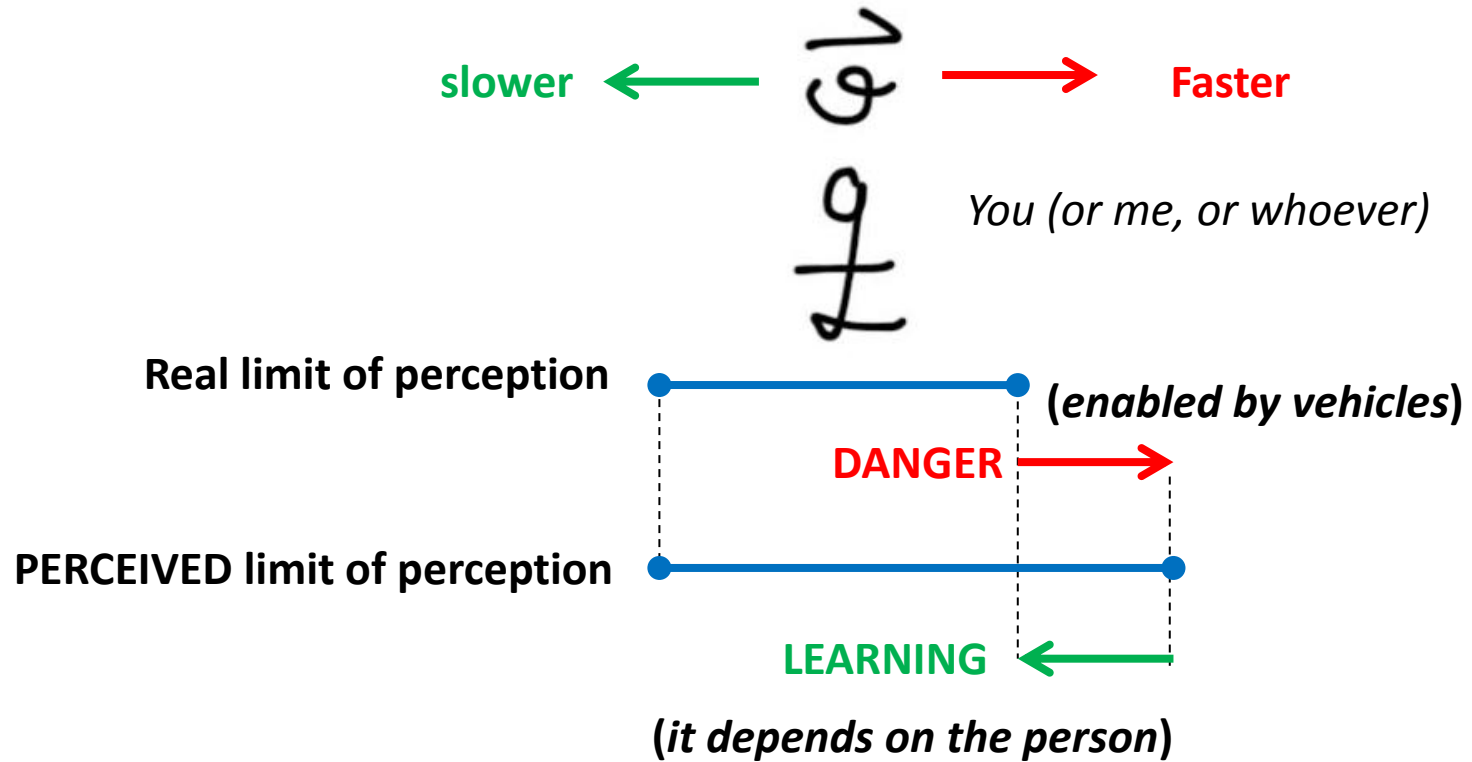
Limits of mobility

The limits of mobility are defined by **machines** (or bodies) and their speed capabilities. The fastest:
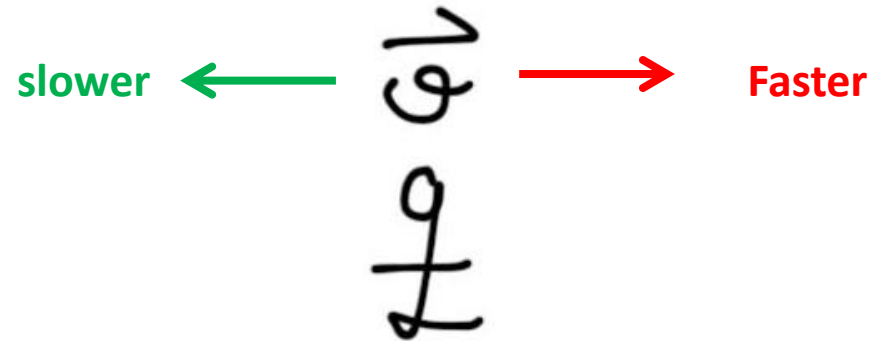
- **Rocket:** Helios Probe, @ 153,800 mph (250,000 km/h)

- **Airplane**: Lockheed SR-71 Blackbird @ 2,200 mph (3,530 km/h)

- **Car**: Buggati Veyron supersport @ 258 mph (415.21 km/h)

- **Bicycle** : Sam Whittingham (flat space, unpaced): @ 83 mph (133 km/h)

- **Person**: Usain Bolt, 100 m in 9.58 seconds - top speed @ 27.3 mph (43.93 km/h)

We must find a way to balance these limits

(perception, human and machine)

The optimistic human...

slower ← → Faster

You (or me, or whoever)

Real limit of perception ●————————● (*enabled by vehicles*)

DANGER →

PERCEIVED limit of perception ●————————————●

LEARNING ←

(*it depends on the person*)

The optimistic human...

Danger

DANGER ⟶

- **How we've endangered the limits:**
  - **Improving vehicles (and accessories)**
  - **Consuming substances**
  - **Changing infrastructure**
  - **i.e. building our way into road safety, responsible mobility, etc**

- **Giving control to "other" (vehicle, infrastructure)**
- **Overconfident / over-reliant on "other"**

James
(SUBWAY)

How people perceive a space controlled by "others"
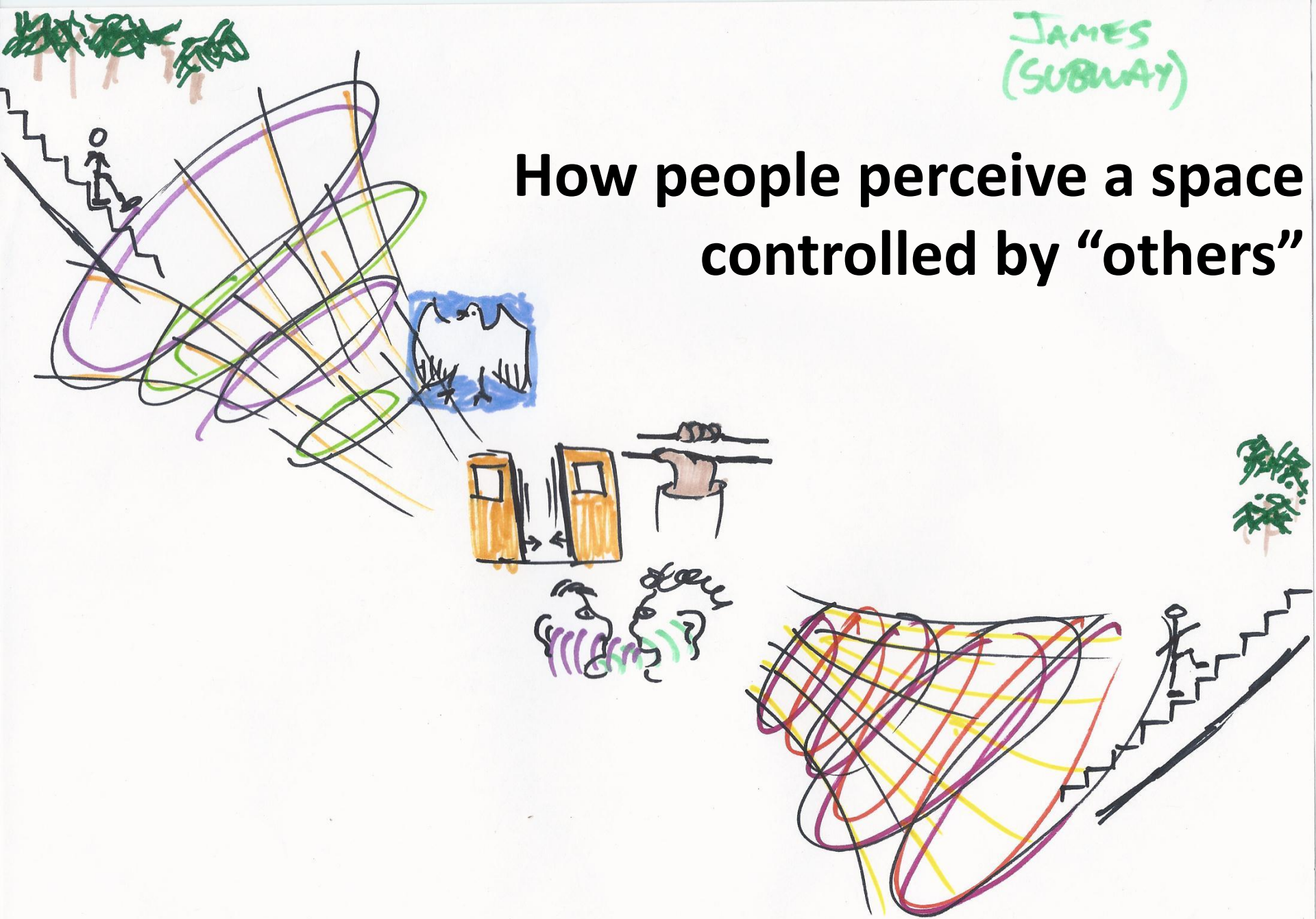
Learning

⟵

- **How we can learn about and accept limits:**
  - **Reducing speed of vehicles**
  - **Creating infrastructure for reduced speeds**

  - **Restoring control to us (bodies) and assuming greater responsibility**
  - **Create confidence in ourselves, restore reliance on our own actions**

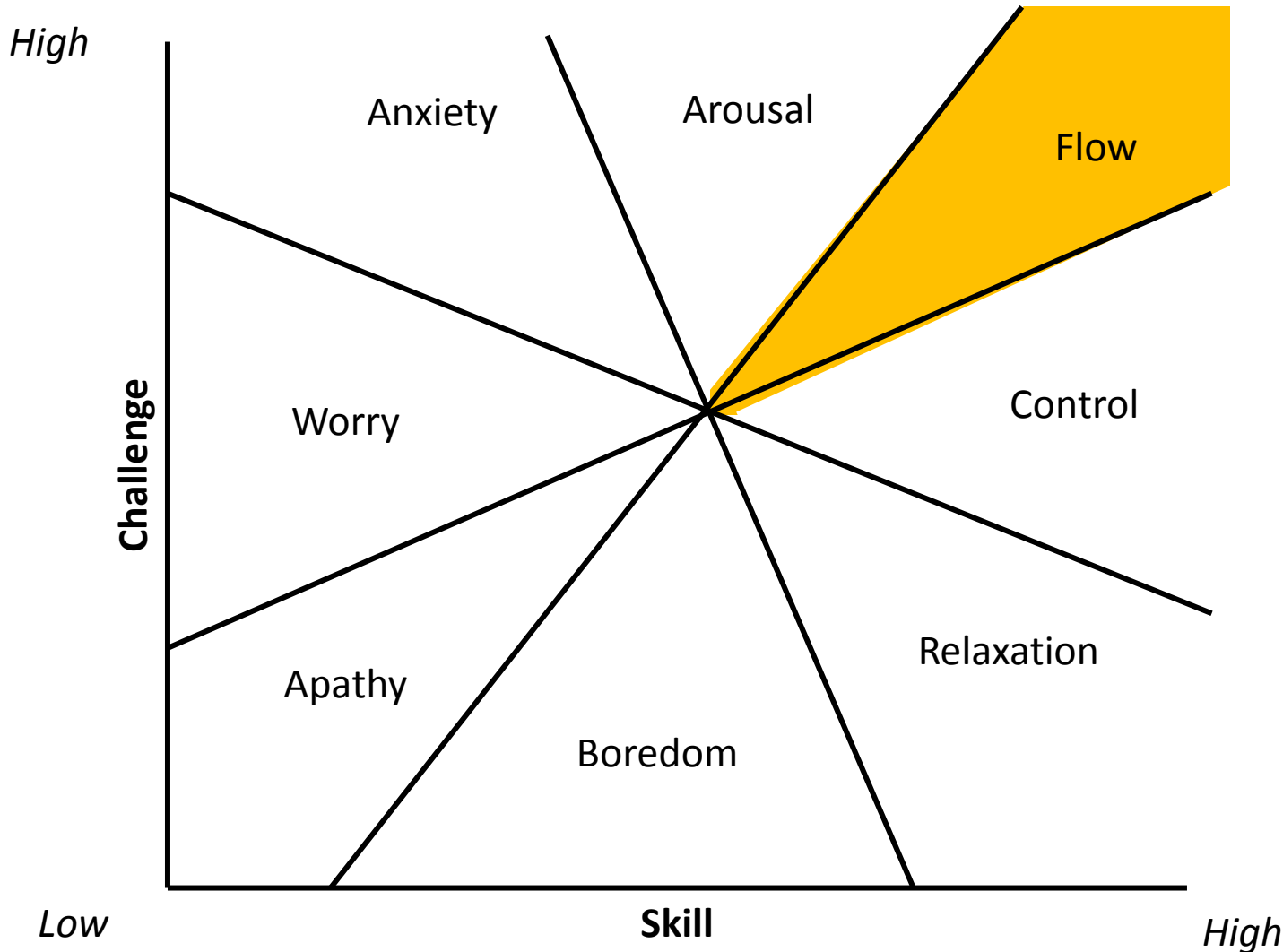# How people perceive a space controlled by themselves

Transport vehicles:
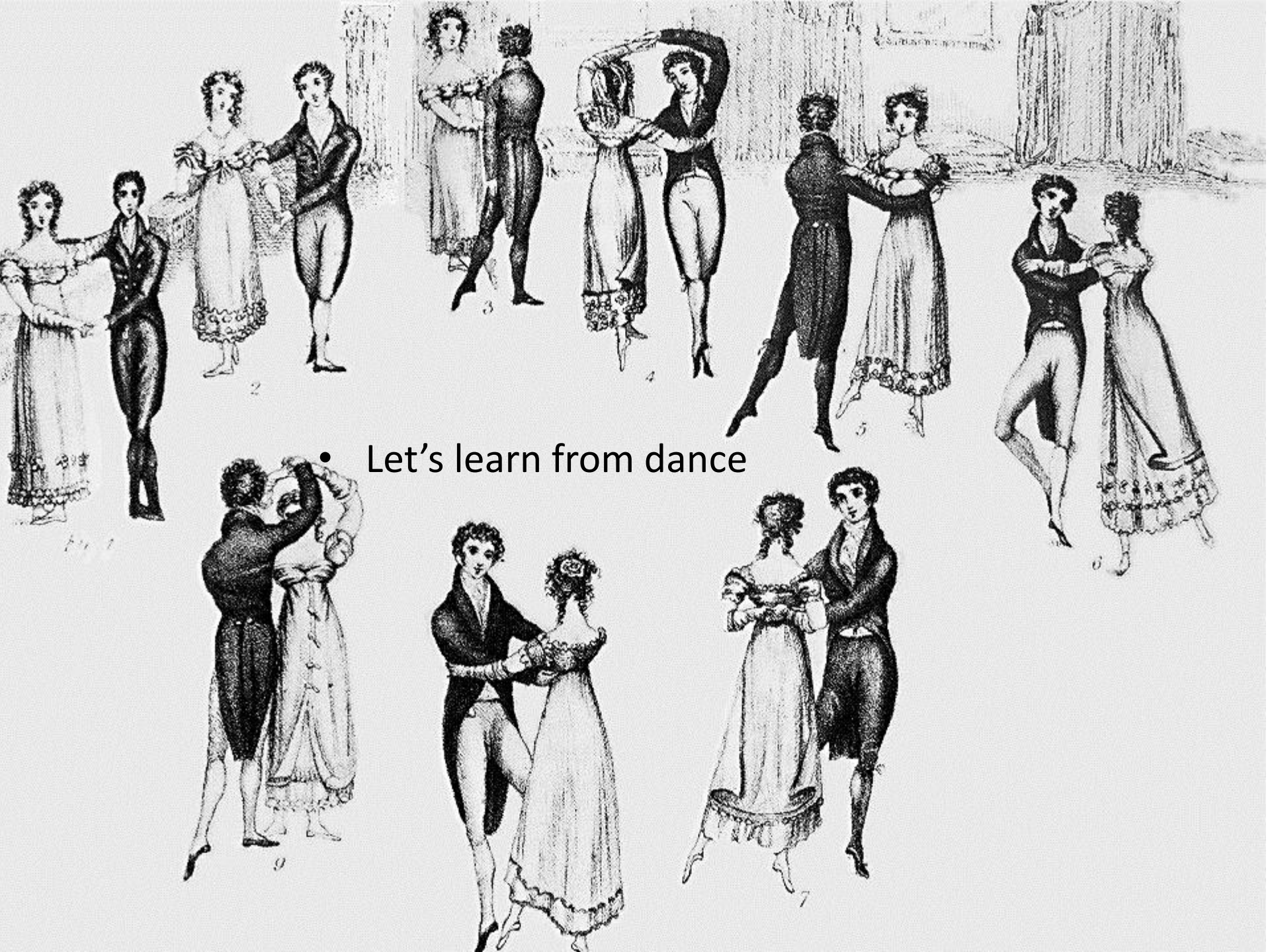# from "own control" to "other control"

Walking Bicycle Ebike (assisted/ Pedelec) Ebike (throttle) Motorcycle Car M/cycle passenger Car Public transport

# One thing that can make it more difficult or easier

High

Challenge

Low

Skill

High

Anxiety

Arousal

Flow

Worry

Control

Apathy

Boredom

Relaxation

Bicycle?

Pedelec?

Motorcycle?

Car?

Public transport?

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Let's learn from dance

Conclusions

- Limits of human perception are set

- Limits of mobility depend on speed

- We must find a way to balance the two sets of limits

- One useful way is to give people (effective) control of their movement

- An additional value would be to give them an experience of "flow" when they move
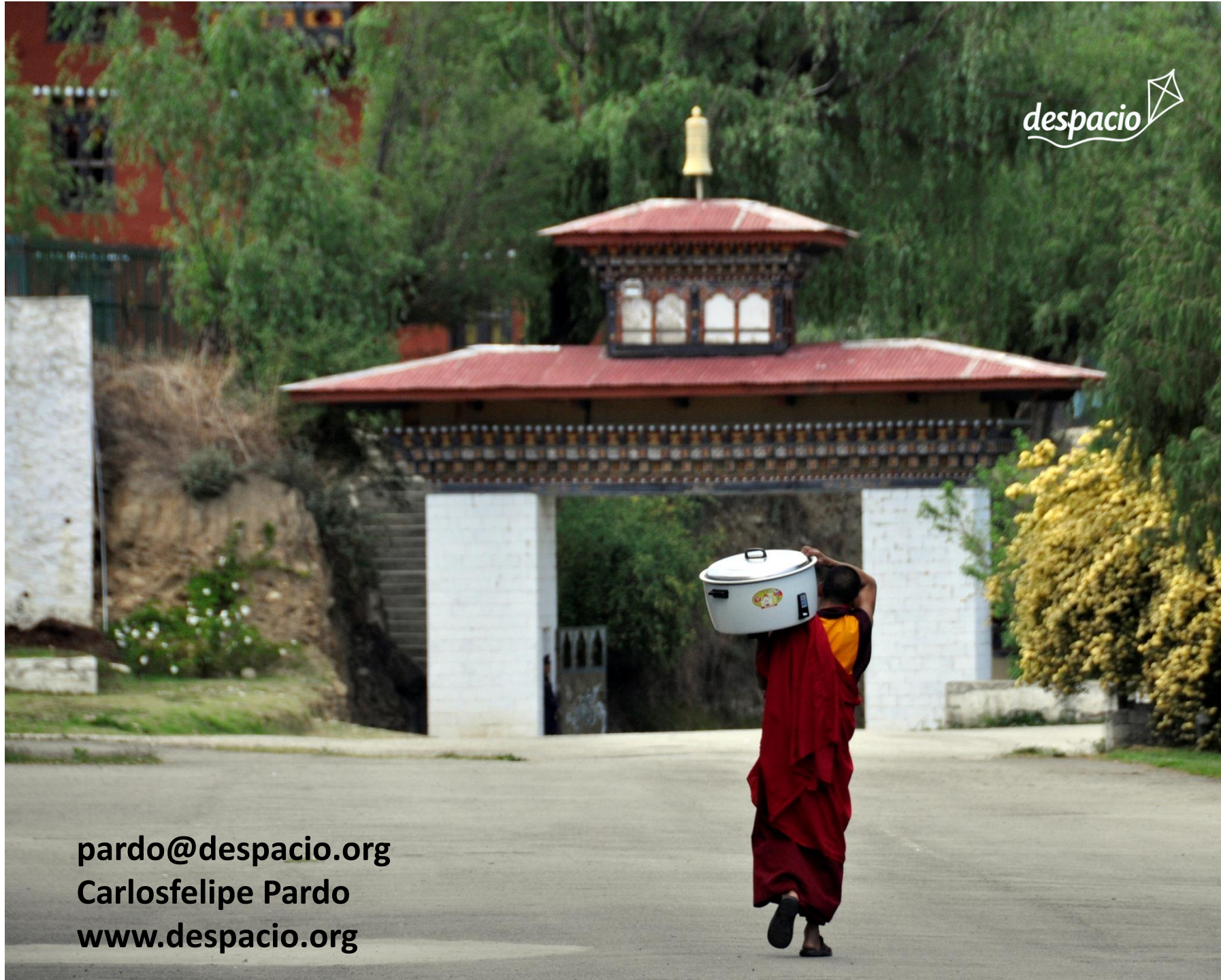
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