Human Scale in Transport Systems

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Outline

1. The need to understand human behavior
2. The conventional perspective on human behavior
3. The 21st century perspective on human behavior
4. Conclusion
5. Discussion
1. The need to understand human behavior
Actions in order of priority:

1. Avoid
2. Shift
3. Improve

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https://www.transformative-mobility.org/
First-order Human-related Impacts

- Direct and indirect safety
- Percent of family budget
- Daily time spent travelling
- Available mode combinations
- Location accessibility
- Particle pollution exposure
- Sedentary time duration
- Overall social isolation
- Negative discrimination

(Roukouni & Correia, 2020)
Transformation of Transport System relies on changes in human behaviors and lifestyles
If we are to enable and steer Change, we should understand what Mobility Behavior is.
2. The conventional perspective on behavior change
Conventional perspective of Mobility Behavior focuses on:

1. Homo economicus
2. Aggregation
Homo Economicus (in Brief)

- Capable of perfectly discriminating between alternatives
- Capable of calculating total costs and benefits of those multiple alternatives
- Capable of choosing the alternative that maximizes the utility
- Has permanent consistency of choice
Aggregation of Travel Patterns
Conventional perspective on Mobility Behavior can narrowly describe some aspects of actual behavior and is ineffective in identifying proper mechanisms for change.
3. The 21st century perspective on human mobility behavior
In reality – Multidimensional and Habitual Homo Mobilis

- We are not always calculating narrowly rational beings
- We do not always act in our own best interest
- Our behavior is often a function of attitudes and intentions, as well as situational constraints
- Our behavior is often habitual and based on mental shortcuts and routines
- Our attitudes and intentions are shaped by normative social pressures and affective factors, situated in time-space
An Example of a Heuristic Bias: 

Loss Aversion

• People value gains and losses differently
• The feeling of pain due to loss is at least double than the similar amount of gain
• *Satisficing* ≈ simplify decisions to a manageable level + use simple heuristics and rules of thumb + as long as it works, keep on using, unless you reach a critical failure

(Kahneman, Knetsch & Thaler, 1991)
3 Aspects of Human Scale

A. Daily Activity Space

B. Embodied Experience

C. Social Norms
A. Daily Activity Space: **Beyond Trip Chains**

- Interdependence of travelling and other daily activities
- Relative stability over life periods
- Distance decay and directional bias
- Changes at (un)planned transitional points in life
- Windows of opportunity for change when habits can be (temporarily) broken

https://www.transformative-mobility.org/
B. Embodied Experiences: Affect and Cognition

- A relation between challenges for body-mind & competences (e.g., anxiety, relaxation, boredom)
- First (negative) impressions can be crucial for future attitudes
- Experiencing (positively) new behavior changes attitude and leads to stabilization of that new behavior

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(De Vos et al., 2015)
C. Social Norms: Relational Beings

• Socio-cultural processes and values affect formation of “appropriate” habits (e.g., equality, proximity to nature, children's independent mobility)

• Social sanctions and copying what “normal/significant” others are doing “rightly” (e.g., parents, employer, best friend, movie character, Instagram influencer, etc.)

• Meanings are actively constructed by infrastructure, policy, and media but also other policy domains (e.g., health and social policy)
In Conclusion

IF we are to live within the **safe and just operating space** for humanity and other life
1. We need to understand the multidimensional Human Scale in addition to Aggregate Scale

2. We need to use existing participatory, design and social science methods for understanding human behavior change

3. We need to envision lifestyles and important values as part of the transport system
Planning as Envisioning

- Mobility infrastructure
- Regulation and policy
- Unknown unknowns
- Wider environment
- Daily activity spaces
- Service models and tech
- Embodied experiences
- Social norms and values
Thank you!

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