

Understanding the footprint of human needs: housing functions as the missing link



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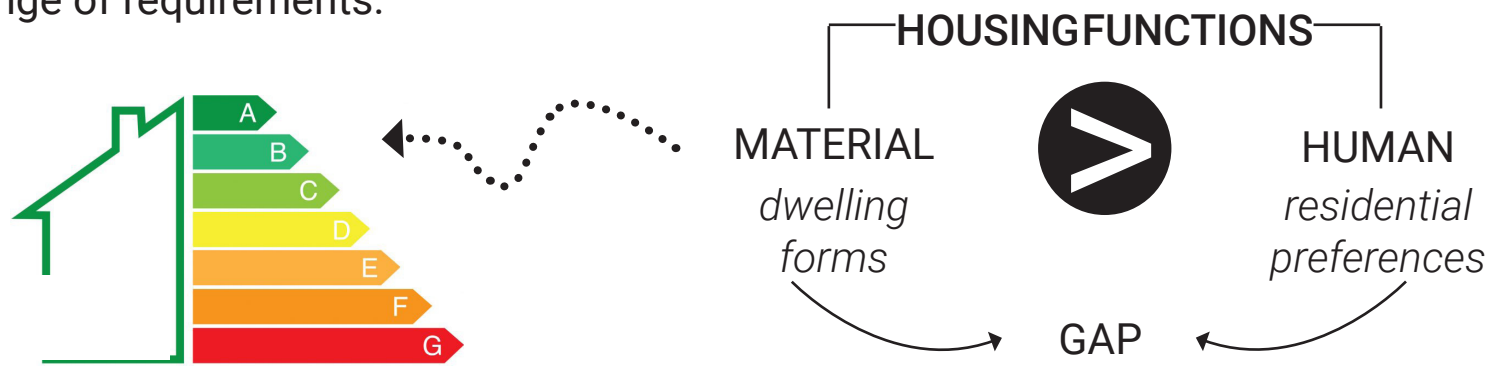
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PROBLEM

To respond to the need for a drastic reduction in the environmental footprint of housing in Switzerland, the residential sector must meet a wide range of requirements.

Housing is a **complex system**, whose material and human behaviours depend on the system's function.

The material has often been privileged over the human behaviour, leading to a gap between environmentally sustainable housing and its acceptance or desirability.

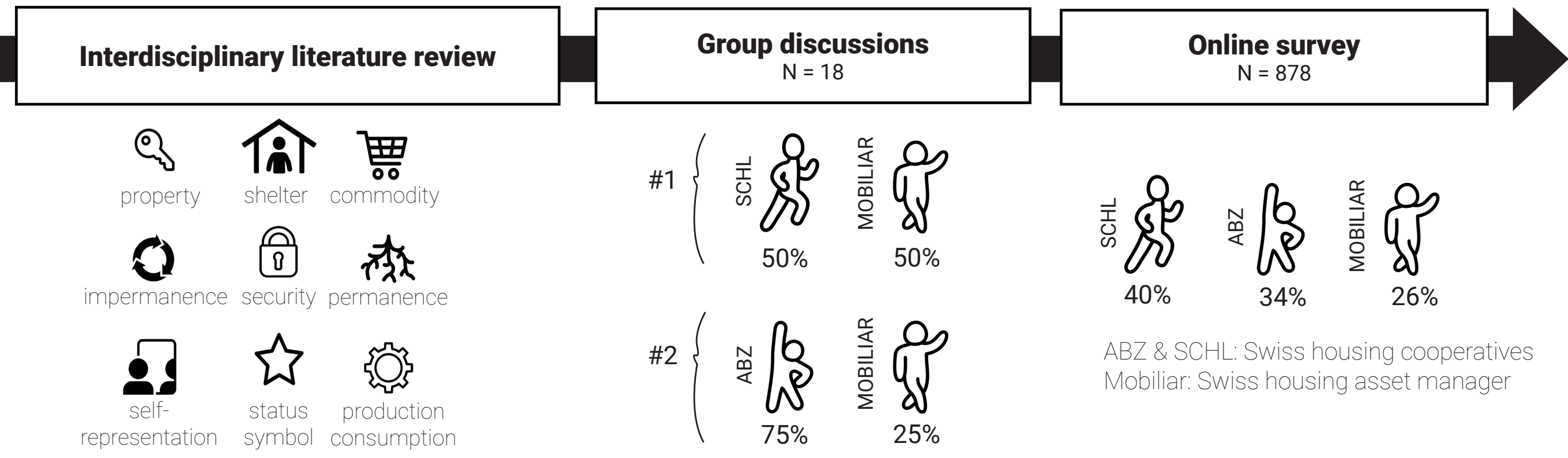


Neglecting the vital needs that housing must satisfy can be detrimental and therefore unsustainable.

GOAL

This research aims to foster a better understanding of the interaction between housing's human and material subsystems in order to support the elaboration of strategies that reduce housing's footprint while accounting for human needs.

METHODS

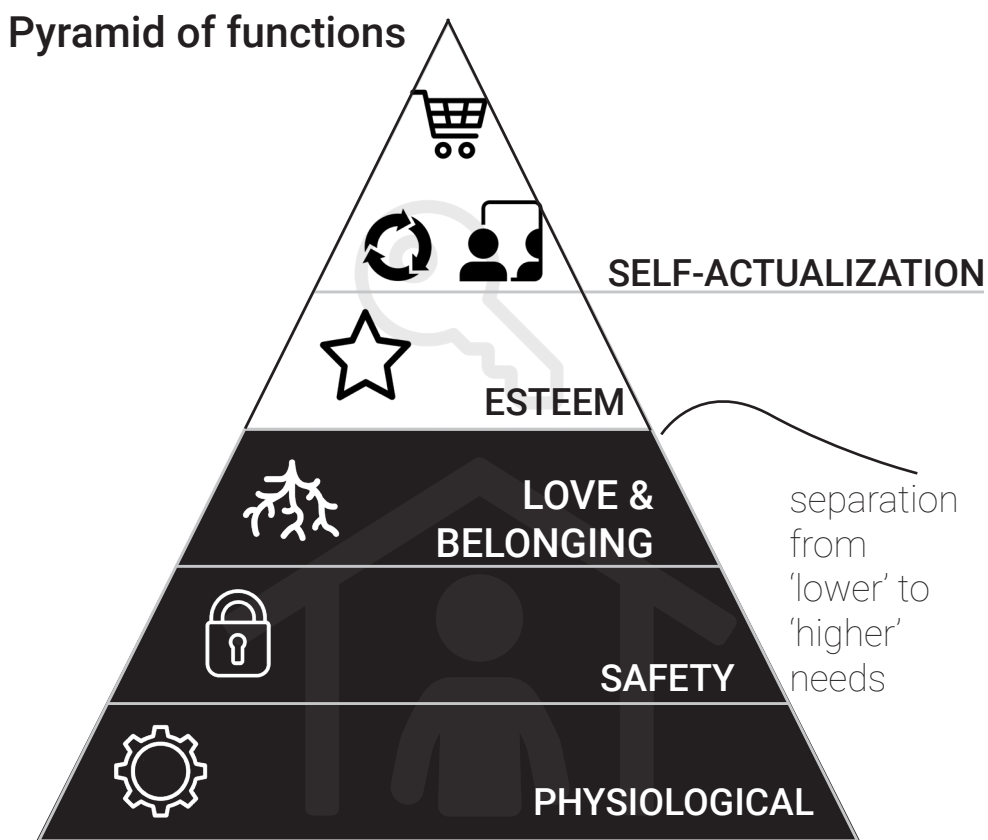


The nine housing functions identified by Pagani & Binder (2021) and Pagani, Baur & Binder (2021) as determinant of residents' satisfaction were linked to the basic needs described in the motivational theory of Maslow (1943).

During two group discussions with the tenants of our project partners, a first exploration was carried out on the meaning of 'housing'.

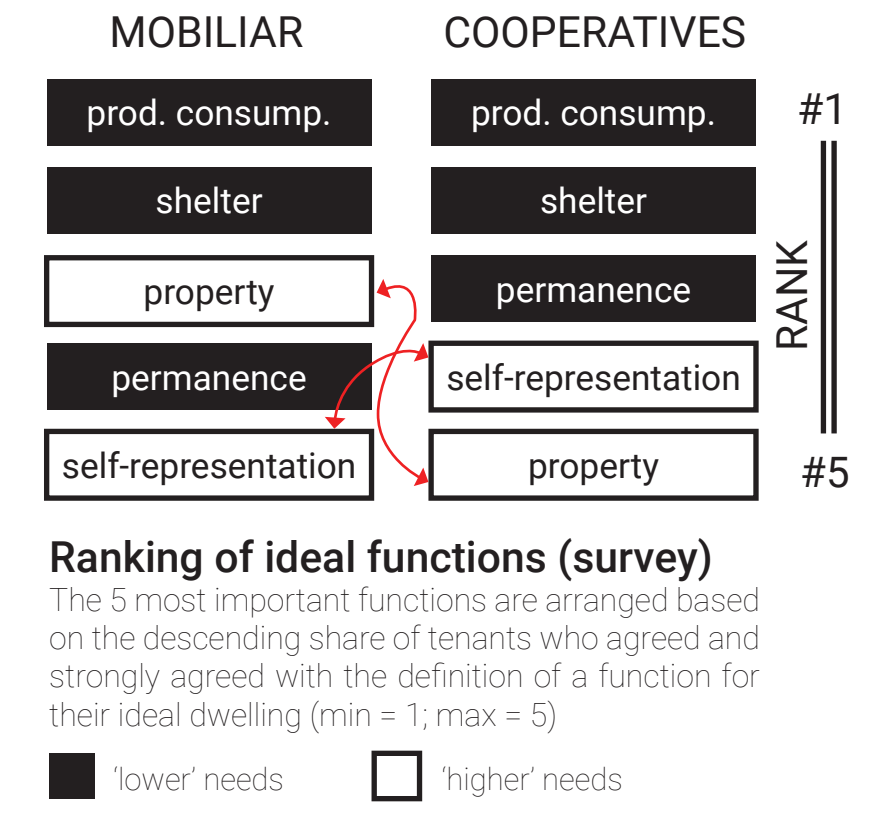
In a larger survey, tenants were asked whether a function corresponded to their ideal dwelling from 1 = strongly disagree to 5 = strongly agree.

RESULTS



What does housing mean to you?

a place where to feel secure
 heimat, a shelter
 'my' place, my kindgom
 a place where I am rooted
 an expression of myself
 a place for hobbies, family, friends
 [...]



DISCUSSION

Function	Need	System behaviour	Obstacle to...
	Physiological	Domestic equipment vs shared facilities	Reduction of energy consumption
	Phys., Safety, Love & Belonging	Detached suburban house	Sharing spaces among different households
	Love & belonging	Attachment, identity	Reduction of underoccupancy
	Self-actualization	Customization	Effective inclusive housing policies
	Self-actualization	Less entitlement or obligations	Environmental responsibility

TAKEAWAYS

Assessing the fulfilment of a desired housing function can provide information about **whether human needs are being met**.
 Functions can inform decision-makers about **how resistant households are to sustainability measures**.

REFERENCES

Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370–396.
 Pagani, A., Baur, I., & Binder, C. R. (2021). Tenants' residential mobility in Switzerland: the role of housing functions. *Journal of Housing and the Built Environment*.
 Pagani, A., & Binder, C. R. (2021). A systems perspective for residential preferences and dwellings: housing functions and their role in Swiss residential mobility. *Housing Studies*.