Portraying role models to promote stair climbing in a public setting: The effect of matching sex and age

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The case for stair climbing

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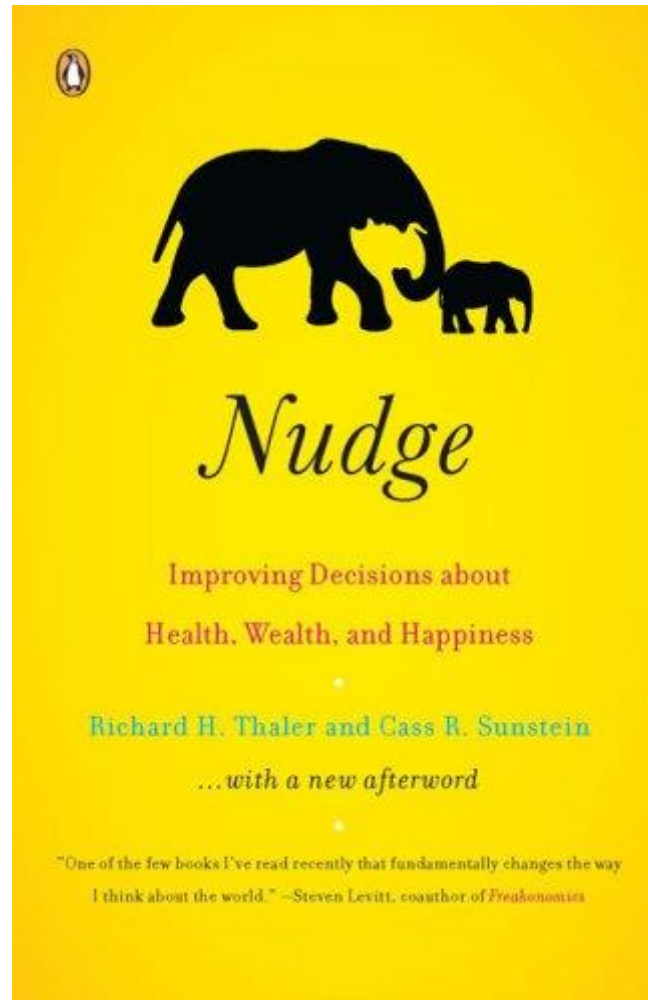# The case continues

The case is not strong enough

"I say we take the stairs"

The environment seduces

How to adapt the environment to 'nudge' people into stair climbing?

Motivational prompts

"Stay in shape, take the stairs"

Intervention in shopping street
(Boen et al., Health Promotion International, 2010)

Without sign: 2%

With sign: 12%

Directional prompts

Footprints in company
(Van Hoecke et al., American Journal of Health Promotion, 2017)

Results

Week	Condition	Stair use (%)
Week 1	Baseline	27.7
Week 2 + 3	Footprints	31.2
Week 4	Footprints + E-mail	43.6**
Week 5	Footprints + Thank you	44.7*
Week 11	Follow-up (footprints)	34.6**

* significantly different from baseline / ** from baseline and previous week

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Lessons from previous research

- Simple environmental prompts can significantly increase stair climbing, but effects are limited.

- A combination of meaning and direction seems most effective.

- Few studies on modelling/mimicry

   (Adams et al., 2006, Webb et al., 2011)

   +

   We are more likely to follow those who are similar to us (Social Identity Approach).

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Hypothesis

A portrayed model matching in age and gender will add most to a motivational sign.

Method & Design

- Observations in train station:

  passersby categorized as male/female and young/old

- Motivational sign (alone) or combined with a portrayed model that was:

  young or old

  male or female

- Randomized order on different platforms on five days

Point-of-choice

Motivational sign alone

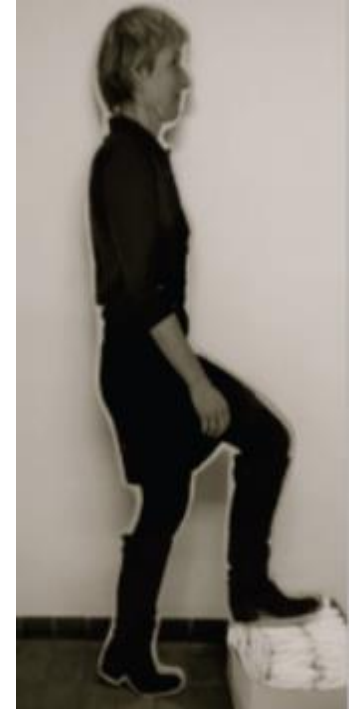# Motivational sign & model

The portrayed models

younger
man

younger
woman

older
man

older
woman

Intervention design

Table 1. Observation schedule

Observation day	Platform	Implementation order of the no-intervention period and the intervention periods					
1	2-3	message	older ♂	no intervention	young ♀	young ♂	older ♀
2	4-5	young ♀	message	young ♂	no intervention	older ♀	older ♂
3	6-7	older ♀	older ♂	message	young ♂	no intervention	young ♀
4	8-9	no intervention	older ♀	older ♂	message	young ♀	young ♂
5	2-3	young ♂	young ♀	older ♀	older ♂	message	no intervention

Control vs. interventions

Condition	Stair use (%)
Control	15.0
Health sign alone	21.7
Sign + mismatched model	21.5
Sign + matched model	37.2**

* significantly different from control / ** from control and previous condition

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Results

Table 2. Observations of stair climbing in gender- and age-related subcategories during the intervention periods in which a health promotion message and a stair model were introduced.

| Subcategory of passersby	Match/mismatch with the stair model	Number of observations	% stair climbers	$\chi^2_{\text{match-mismatch}}$
Overall	Match	226	37.2	20.78***
	Mismatch	581	21.5	
Younger men (≤30 years)	Match	52	42.3	6.21*
	Mismatch	138	23.9	
Younger women (≤30 years)	Match	65	44.6	9.03**
	Mismatch	182	24.7	
Older men (≥40 years)	Match	67	20.9	0.22
	Mismatch	147	23.8	
Older women (≥40 years)	Match	42	45.2	23.23***
	Mismatch	114	10.5	

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Conclusions

- Portrayed models prompt stair climbing in addition to motivational sign, but only when they were matched in sex and age.

- Tailored modelling should be considered in future research.

- No matching effect for older men?

- What about the long term?

Questions and suggestions?

The 'long' climb to my university fitness
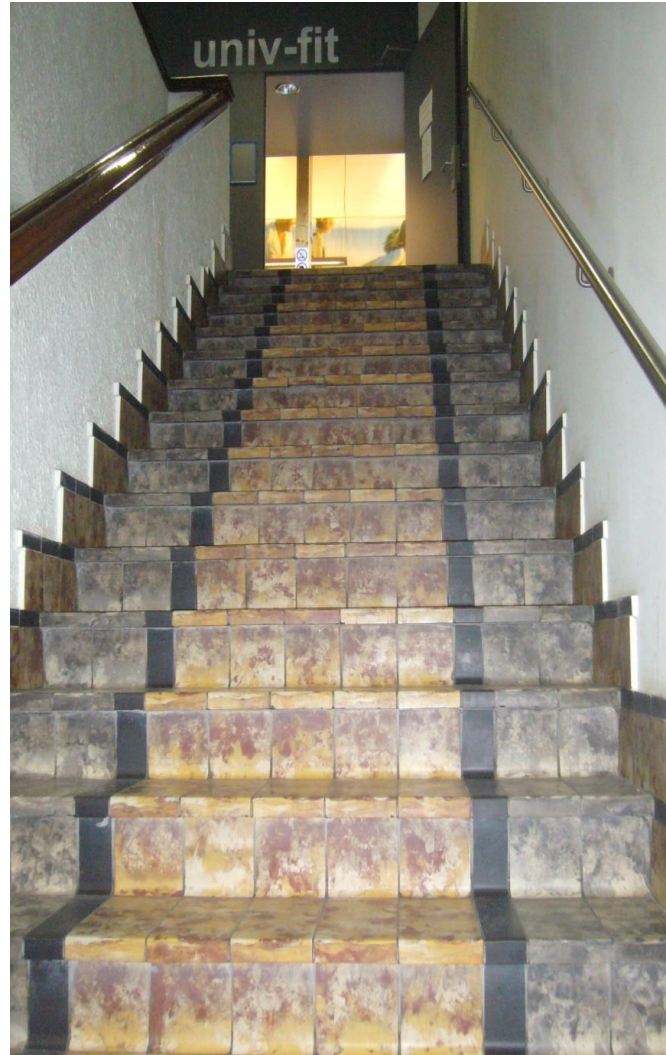
Shopping Mall

Results
(Van Hoecke et al., AJHP, 2017)

Week	Condition	Observations	Stair use (%)
Week 1+2	Baseline	4305	10.9
Week 3	Footprints	2268	10.0
Week 4	Footprints + Sign	2148	22.3**
Week 5	Footprints + Sign + Thank you	2216	20.5*
Week 18	Follow-up with footprints	1686	13.5*

* significantly different from baseline / ** from baseline and previous week

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