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Increasing Consumer Participation in Textile Disposal Practices: Implications Derived from an Extended Theory of Planned Behaviour on Four Types of Post-Consumer Textile Disposal

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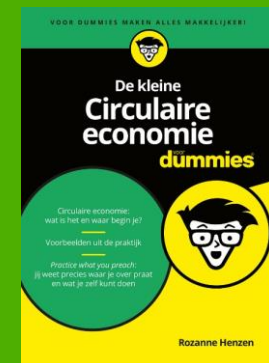
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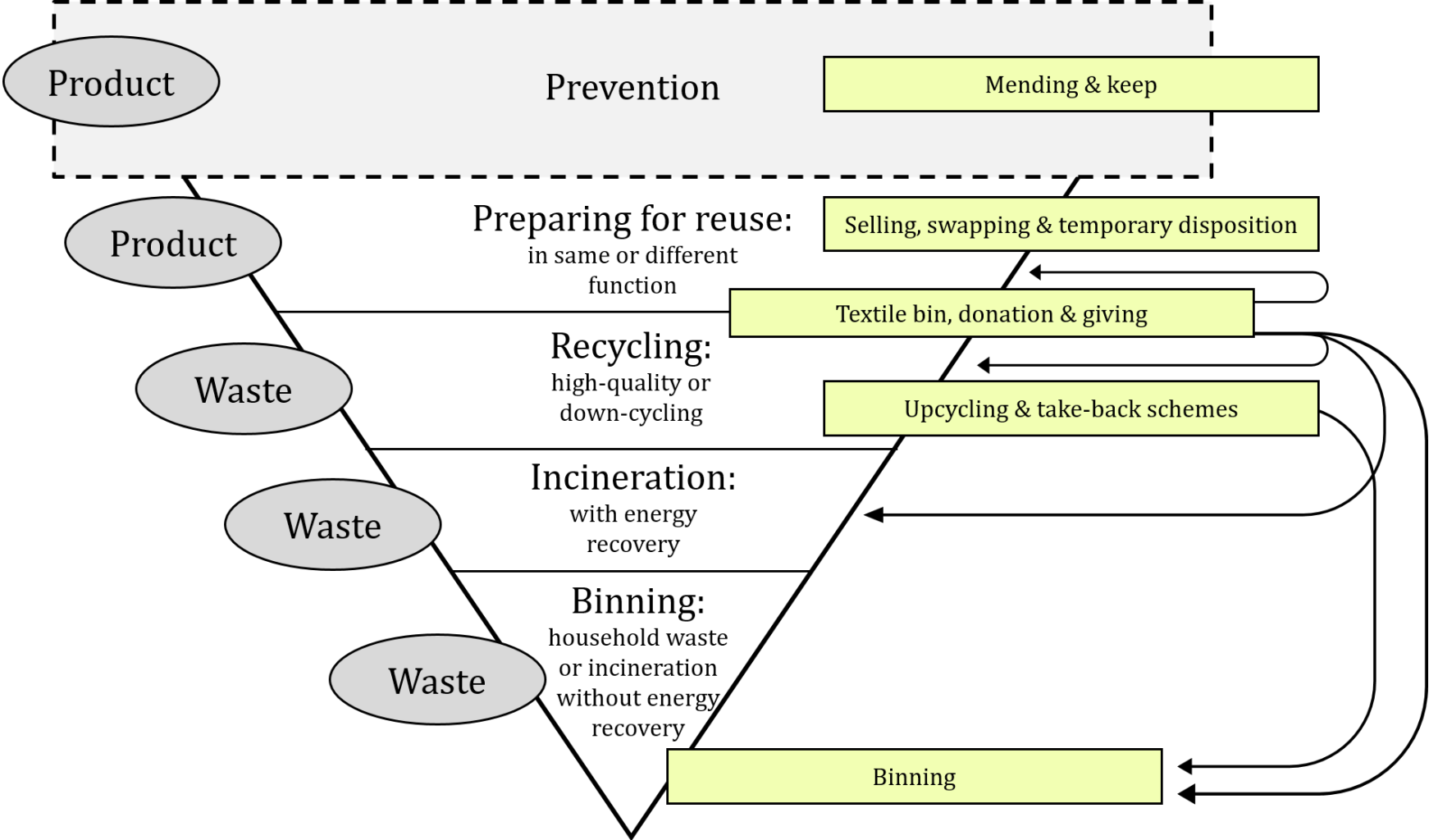




Problem Statement

- In 2030 fashion consumption will have grown by 65% compared to now. This will lead to a 61% increase in waste creation
- In the EU consumers discard 2.29 billion kilograms of textiles
- Only 13% of total material input is recycled and less than 1% is reused to create new textiles
- 80-85% of unwanted textiles end up between regular household waste; the collection rate is only 15-20%
- In Flanders 49% ends up in our household waste

The Textile Disposal Framework



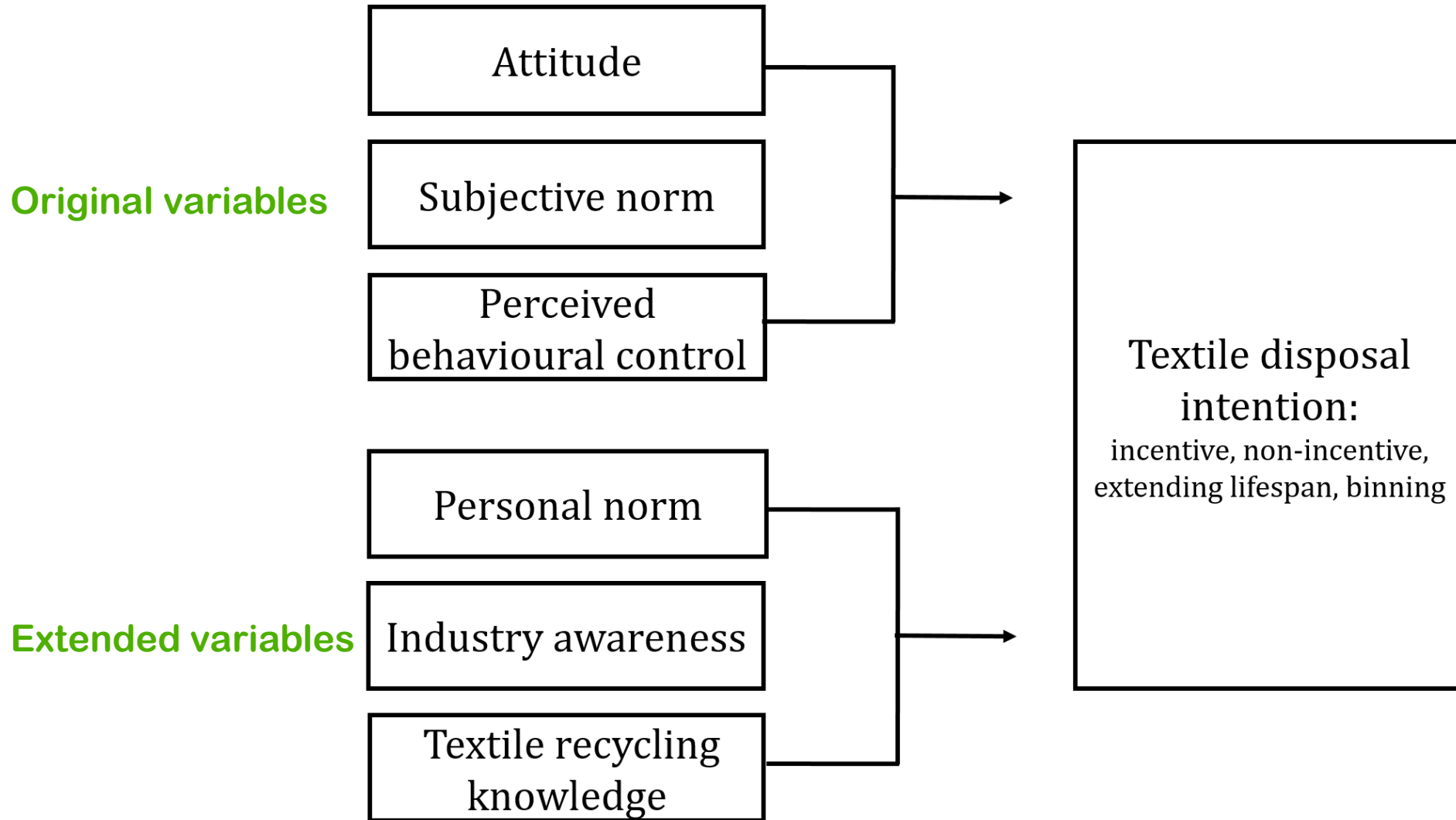


Four Textile Disposal Categories

1. Dispose in exchange for an **incentive**: take-back schemes, selling, swapping or temporary disposition
2. Dispose **without an incentive**: donation, giving, textile bin or upcycling
3. Extend the **lifespan** of textiles: keeping, mending
4. Bin unwanted textiles between **household waste**: binning

“What is the effect of an extended Theory of Planned Behaviour on consumers’ textile disposal intention and what are the derived behavioural drivers for successfully increasing consumer participation in reducing the amount of textile waste?”

The Extended Theory of Planned Behaviour (TPB)



Research Methodology

- **Data collected:** Flanders & the Netherlands
- **Online survey:** composed of existing & validated scales, translated to Dutch (if needed)
- **Six picture scenarios:** measuring disposal intention (old socks, ripped sheets, dress, suit, Hugo Boss shirt, jeans with broken zipper and worn-out sneakers)
- **Research sample:** convenience sample of 491 respondents (77.2 percent female, 22.6 percent male, average age of 36.83, 40.9 percent Flemish, 56.6 percent Dutch)



**Wat doet u met uw
ongewenste textiel?**

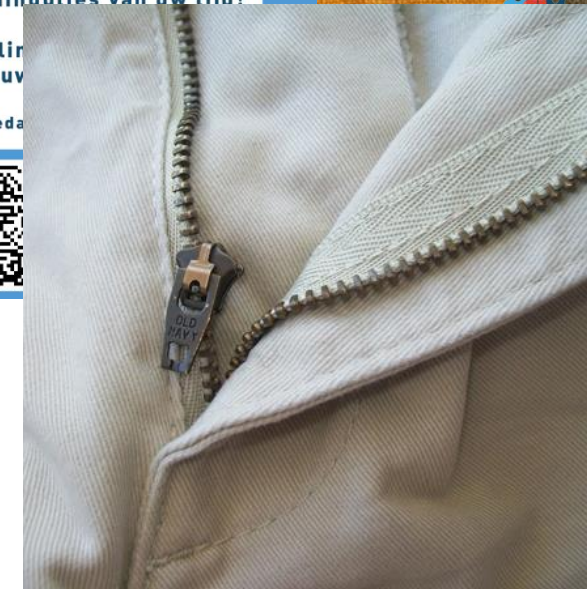
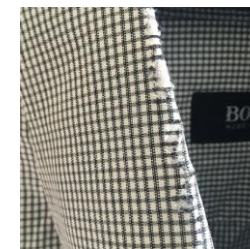


Wat doet u met uw ongewenste textiel?

Vertel het ons en maak kans op 25 euro shoptegoed bij Nike, JBC, Bel&Bo of Happy Kiddo in ruil voor 10 minuutjes van uw tijd!

Klik snel op de link of de QR-code met uw smartphone

op 25 euro
&Bo of Happy
s van uw tijd!
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General Research Outcomes

1. On average respondents disposed of **27.49 pieces** of unwanted textiles over the past year. In Flanders that would be around 180 million pieces of discarded textiles. Every year.
2. Textile recycling knowledge is **not** a significant predictor of any of the behavioral intentions regarding textile disposal.
3. There is **a gap between** knowledge, past behaviour and intention.

Incentive-Based Disposal: Past Behaviour

67.4% did **not** engage in incentive-based disposal:

- **Take-back schemes:** 57.2% familiarity, 16.5% acted
- **Selling:** 83.7% familiarity, 21.8% acted
- **Swapping:** 48.7% familiarity, 8.4% acted
- **Temporary disposition:** 26.5% familiarity, 1.4% acted



Incentive-Based Disposal: Behavioural Intention

The intention to dispose of textiles in exchange for an incentive has the **lowest intention score** of all the categories: 2.49 on a scale from zero to seven (strongly disagree to strongly agree)

X Correlates with industry awareness, however statistically insignificant

X None of the variables are a significant predictor of incentive-based disposal

? If the incentive is not high enough, the incentive could counteract





Non-Incentive-Based Disposal: Past Behaviour

93.9% **engaged in** non-incentive-based disposal:

- **Donation:** 92.2% familiarity, 51.9% acted
- **Giving away:** 95.9% familiarity, 60.7% acted
- **Textile bin:** 94.5% familiarity, 71.1% acted
- **Upcycling:** 48.8% familiarity, 13.4% acted



Non-Incentive-Based Disposal: Behavioural Intention

The intention to dispose of textiles without an incentive has the **highest intention score** of all the categories: 3.94, on a scale from zero to seven (strongly disagree to strongly agree)

+ Three variables are positive behavioral drivers: **subjective norm** ($p = .006, \beta = .15$), **personal norm** ($p = .007, \beta = .14$) and **industry awareness** ($p = .001, \beta = .16$).

+ The key is anticipating on industry awareness and appealing to the consumers' subjective norms, which will both influence personal norm

Extending the Lifespan of Textiles: Past Behaviour

14.3% did **not** extend the lifespan of their textiles:

- **Mending:** 82.5% familiarity, 62.5% acted
- **Keep:** 83.7% familiarity, 60.5% acted



Extending the Lifespan of Textiles : Behavioural Intention

The intention to extend the lifespan of textiles score has the **second highest intention score**: 3.60, on a scale from zero to seven (strongly disagree to strongly agree)

X However, the extended TPB was a statistically insignificant predictor

? Different predictor variables, specifically targeting the prevention of textile waste, could make a statistically significant contribution





Disposal of Unwanted Textiles Between Household Waste: Past Behaviour

71.3% **binned** their unwanted textiles between household waste for various reasons:

- They are in a **bad state**: 50.7%
- There are **no other option** for socks, underwear or thighs: 39.9%
- Other options are **time-consuming** and take too **much effort**: 10.2%
- **Instant** disposal: 7.9%
- Unwanted textiles are **out of fashion**: 3.5%



Disposal of Unwanted Textiles Between Household Waste : Behavioural Intention

The binning intention score is 3.56, which is **almost as high as** the intention score for lifespan extension, on a scale from zero to seven (strongly disagree to strongly agree)

+ . Two variables are positive behavioural drivers: **personal norm** ($p < .050$, $\beta = -.22$) and **industry awareness** ($p < .050$, $\beta = -.22$).

+ The more aware consumers are, the higher their personal norm (feelings of moral obligation) and thus the lower their intention to bin.

To Recap Main Findings

- ! There is a gap between knowledge, previous behaviour and intention.
- ✗ Incentive-based disposal has the lowest intention score, while the industry is really focusing on that.
- ✗ The model does not predict incentive-based disposal nor extending the lifespan of textiles.
- + Subjective norm, personal norm and industry awareness positively influence non-incentive-based disposal.
- + Personal norm and industry awareness negatively influence the intention to bin textiles between household waste.





Conclusion

- All four disposal categories have different behavioural drivers
→ *need for separate consumer strategies*
- Two theoretical contributions to the usage of TPB in researching post-consumer textile disposal
→ *perceived behavioural can be excluded*
→ *an extended TPB is more suitable*

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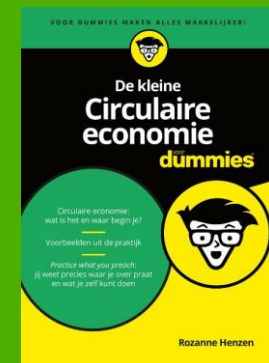
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Definition of terms

- **Textiles:** all types of textiles and shoes made from synthetic or natural fibres. Textiles are defined as clothing, footwear, leather goods, bed-, bath- and decorative textiles.
- **Disposal:** getting rid of unwanted items, regardless of whether the item is disposed of as waste, for recycling or reuse with a next owner.
- **Textile disposal methods:** different methods for the disposal of textiles in exchange for an incentive, without an incentive, extending the lifespan or binning.

