

BIOTEXFUTURE

COMMUNICATION STRATEGIES FOR BIOPOLYMER-BASED PRODUCTS

INSIGHTS FROM SIX ONLINE EXPERIMENTS
APRIL 2022

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**The goal of this research is
to investigate the impact of
communication on consumers' ²
buying behavior of biopolymer-
based products**

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ABOUT THIS RESEARCH

THIS RESEARCH IS PART OF „TRANSITIONLAB2- TP C“ AT THE UNIVERSITY OF BAYREUTH

Research context

This research is part of „Transition-Lab 2 - TP C“, the University of Bayreuth project in BIOTEXFUTURE.

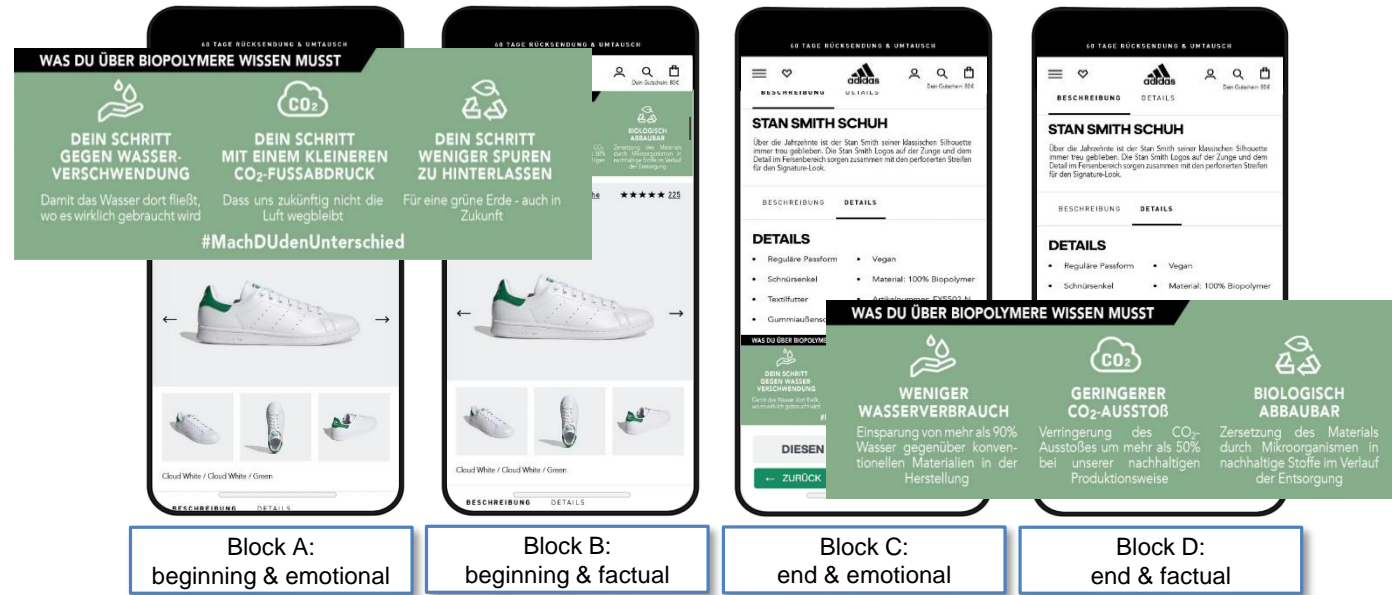
Methodology

Based on a literature review, consumer & expert interviews, **research questions** were developed by six teams of 3-4 master students together with adidas, RWTH Aachen, University of Bayreuth researchers.

Online experiments were designed: **Subsamples of participants (blocks)** visited different **online shops**. Later, the shares of choices for biopolymer-based products were compared.

Sample research question:

Where to position and how to communicate advantages when offering biopolymer-based products?



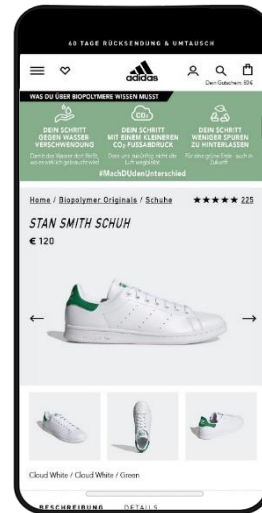
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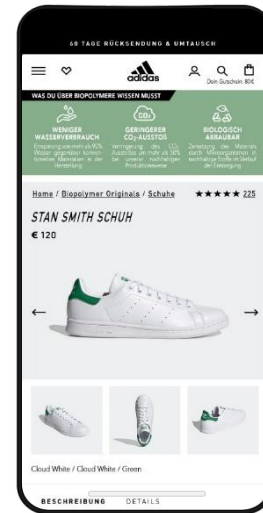


Sample research question:

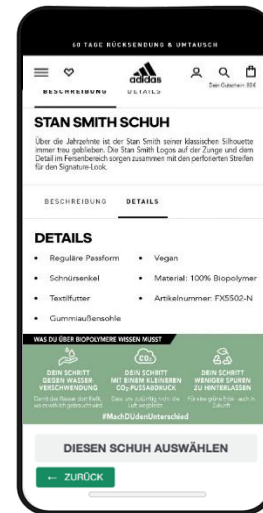
Where to position and how to communicate advantages when offering biopolymer-based products?



Block A: beginning & emotional



Block B: beginning & factual



Block C: end & emotional



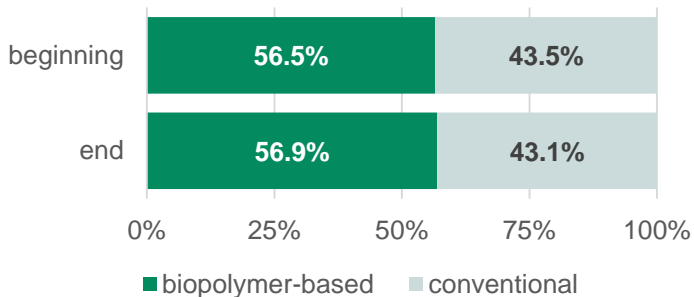
Block D: end & factual

ABOUT THIS RESEARCH

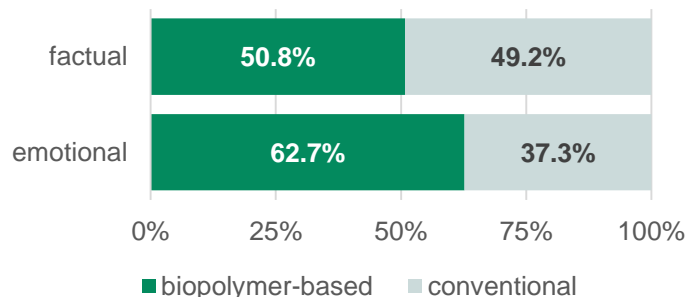
THIS RESEARCH IS PART OF „TRANSITIONLAB2-TPC“ AT THE UNIVERSITY OF BAYREUTH

Selected results:

Shares of sneaker choices depending on the positioning



Shares of sneaker choices depending on the communication type



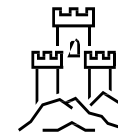
Selected implications: Make sure to address consumers emotionally.

To deal with the social desirability bias and the attitude-behavior-gap, the researchers have carefully designed the experiments to reflect **BEHAVIOR** (= choice, purchase) as realistically as possible:

- Consumers choose between alternatives **in block-specific simulated online shops** (Discrete choice Analysis).
- **Choices are “incentive-aligned”**, i.e. having consequences for the participants.
- Samples of **students** (altogether n=959) as well as samples from **online access panels** (n=1,810 representative sneaker buyers) participated.

For each of the six experiments 60-slides reports were developed and presented January 28, 2022.

KEY INSIGHTS



RESULTS

When sustainability aspects address consumers emotionally, purchases of biopolymer-based products increase. The positioning of information is less important.

Sustainability aspects that refer to what consumers feel responsible for (e.g. end-of-life) outshine manufacturing aspects.

Visualizing and highlighting advantages increase purchases of biopolymer-based products.

Purchases of biopolymer-based sneakers decrease when functional disadvantages are mentioned.

IMPLICATIONS

Make sure to address consumers emotionally.

Make sure to focus on aspects that refer to the consumers' assumed responsibility.

Visualize advantages through graphical media. Use visualizations to highlight important advantages.

Be careful when mentioning disadvantages of biopolymer-based products. Focus on and highlight advantages.

(see online experiment 1)

(see online experiment 2&3)

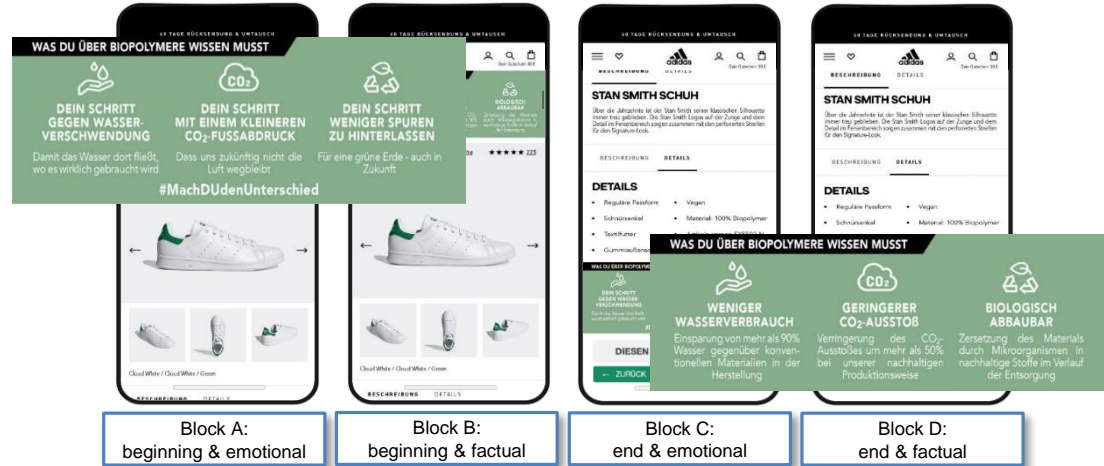
(see online experiment 4)

(see online experiment 5&6)

KEY INSIGHT 1

BIOPOLYMER-BASED PURCHASES INCREASE, WHEN COMMUNICATED EMOTIONALLY

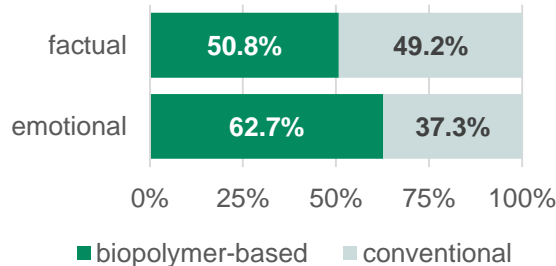
When sustainability aspects emotionally address consumers, purchases of biopolymer-based products increase. The positioning of information is less important.



Case Study

- Factual communication: **“Less water consumption”**
- Emotional communication: **“Your contribution to reduce water consumption”**
- Positioning: beginning vs. end (see the above online shop screenshots)
- ▶ For details see online experiment 1

Impact on sneaker choices



Recommendations

- Make sure to address consumers emotionally.

KEY INSIGHT 2

BIOPOLYMER-BASED PURCHASES INCREASE, WHEN FOCUSING ON END-OF-LIFE

Sustainability aspects that refer to what consumers feel responsible for (e.g. end-of-life) outshine manufacturing aspects.



Welche der folgenden Optionen würden Sie wählen?

(10 von 12)



Welche der folgenden Optionen würden Sie wählen?

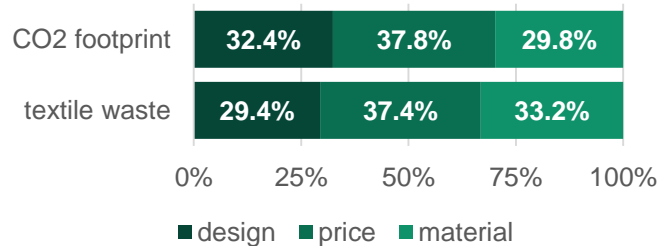
(10 von 12)



Case Study

- Respondents selected sneakers that vary with respect to attributes like price, design, material.
- Blocks of respondents received different information on biopolymer-based sneakers (e.g. reducing CO₂ footprint, reducing textile waste).

Impact on attribute importance



Recommendations

- Make sure to focus on aspects that refer to the consumers' assumed responsibility (e.g. textile waste, end-of-life).
- Production aspects are important but have less effect.

► For details see online experiments 2 and 3

KEY INSIGHT 3

BIOPOLYMER-BASED PURCHASES INCREASE, WHEN ADVANTAGES ARE VISUALIZED

Visualizing and highlighting advantages increase purchases of biopolymer-based products.



1

ADIDAS FUTURECRAFT BIOFABRIC

Adidas bringt einen der beliebtesten Performance-Laufschuhe auf die Straßen der Stadt.

Rezensionen: ★★★★★ 138Z

Material: 100% biobasiert & abbaubare Kunststoffe

Gewicht: 322 g (Größe: 42 2/3)

Wasserfußabdruck:

2

ULTRABOOST DNA 4.0 LAUFSCHUH

Der neue Ultraboost als Trendsetter.

Rezensionen: ★★★★★ 1723

Material: Synthetischer Kunststoff

Gewicht: 335 g (Größe: 42 2/3)

Wasserfußabdruck:

3

ULTRABOOST DNA 4.0 LAUFSCHUH

Der neue Ultraboost als Trendsetter.

Rezensionen: ★★★★★☆ 1030

Material: Synthetischer Kunststoff

Gewicht: 335 g (Größe: 42 2/3)

Wasserfußabdruck:

4

ADIDAS FUTURECRAFT BIOFABRIC

Adidas bringt einen der beliebtesten Performance-Laufschuhe auf die Straßen der Stadt.

Rezensionen: ★★★★★☆ 1273

Material: 100% biobasiert & abbaubare Kunststoffe

Gewicht: 322 g (Größe: 42 2/3)

Wasserfußabdruck:

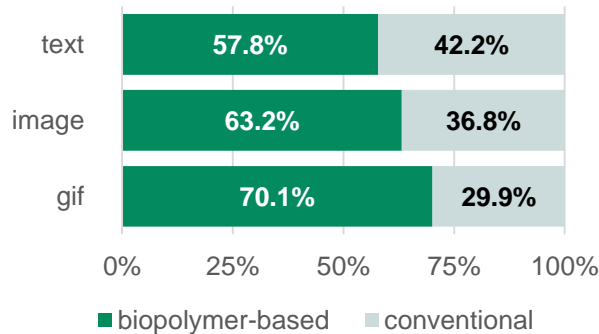
Case Study

Different media types describe high vs. low water consumption:

- text: high vs. low
- image: vs. vs.
- gif: vs.

► For details see online experiment 4

Impact on sneaker choices



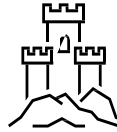
Recommendations

- Visualize advantages through graphical media (ideally animated).
- Use visualizations to highlight important advantages.

KEY INSIGHT 4

BIOPOLYMER-BASED PURCHASES DECREASE, WHEN DISADVANTAGES ARE COMMUNICATED

Purchases of biopolymer-based sneakers decrease when functional disadvantages are mentioned.



Wenn Sie sich für eines der Produkte entscheiden müssten, wie wäre ihre Wahl?
(1 of 10)

Produkt	adidas Ultraboost	Nike Air Zoom Pegasus	Brooks Levitate
Marke	adidas Ultraboost	Nike Air Zoom Pegasus	Brooks Levitate
Material	Biobasierte Variante	Synthetische Variante	Biobasierte Variante
Preis	200€	180€	100€
	<input type="button" value="Wählen"/>	<input type="button" value="Wählen"/>	<input type="button" value="Wählen"/>

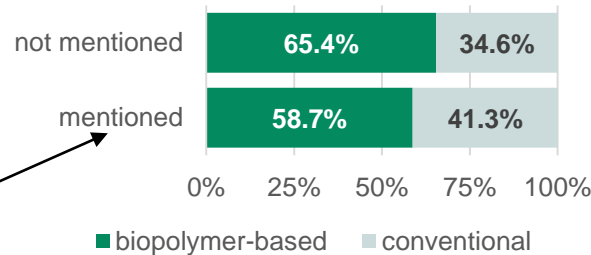
70% recycletes Polyester
30% biobasierter Kunststoff
nachhaltig, ressourcenschonend
federndes Laufgefühl
leicht reduzierte Dämpfung (-5%)
leicht reduzierte Traktion (-5%)
windsicher

Keine der Optionen

Case Study

- Sneakers that vary with respect to brand, material, and price were presented to collect choices.
- Blocks of respondents received different information on biopolymer-based sneakers: not mentioning vs. mentioning reduced functionality.

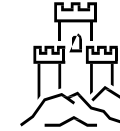
Impact on sneaker choices



Recommendations

- ❑ Be careful when mentioning disadvantages of biopolymer-based sneakers/products.
- ❑ Focus on and highlight advantages.

► For details see online experiment 5 and 6



RESULTS

When sustainability aspects address consumers emotionally, purchases of biopolymer-based products increase. The positioning of information is less important.

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Visualizing and highlighting advantages increase purchases of biopolymer-based products.

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(see online experiment 1)

(see online experiment 2&3)

(see online experiment 4)

(see online experiment 5&6)

FURTHER READINGS

Books

- **Baier, Daniel; Brusch, Michael (Hrsg.) (2021):** Conjointanalyse – Methoden, Anwendungen, Praxisbeispiele, 2. Auflage, Springer, Berlin.

Articles

- **Baier, Daniel; Rese, Alexandra (2020):** How to Increase Multichannel Shopping Satisfaction? An Adapted Kano Based Stage-Gate Approach to Select New Technologies. In: Journal of Retailing and Consumer Services Bd. 56.
- **Baier, Daniel; Stöcker, Björn (2021):** Profit Uplift Modeling for Direct Marketing Campaigns: Approaches and Applications for Online Shops. In: Journal of Business Economics.
- **Brand, Benedikt Martin; Rausch, Theresa Maria (2021):** Examining Sustainability Surcharges for Outdoor Apparel Using Adaptive Choice-Based Conjoint Analysis. In: Journal of Cleaner Production.
- **Kopplin, Cristopher Siegfried; Rösch, Stella Franca (2021):** Equifinal Causes of Sustainable Clothing Purchase Behavior: An fsQCA Analysis Among Generation Y. In: Journal of Retailing and Consumer Services, Vol. 63.
- **Rausch, Theresa Maria; Baier, Daniel; Wening, Stefanie (2021):** Does Sustainability Really Matter to Consumers? Assessing the Importance of Online Shop and Apparel Product Attributes. In: Journal of Retailing and Consumer Services Bd. 63.
- **Rausch, Theresa Maria; Kopplin, Cristopher Siegfried (2021):** Bridge the Gap: Consumers' Purchase Intention and Behavior Regarding Sustainable Clothing. In: Journal of Cleaner Production, Vol. 278.
- **Rese, Alexandra; Baier, Daniel; Rausch, Theresa Maria (2021):** Success Factors in Sustainable Textile Product Innovation: An Empirical Investigation. In: Journal of Cleaner Production, Vol. 278.
- **Rese, Alexandra; Schlee, Tobias; Baier, Daniel (2019):** The Need for Services and Technologies in Physical Fast Fashion Stores: Generation Y's Opinion. In: Journal of Marketing Management, Bd. 35, Heft 15/16, S. 1437-1459.
- **Schreiner, Timo; Baier, Daniel: Online Retailing During the COVID-19 Pandemic (2022):** Consumer Preferences for Marketing Actions with Consumer Self-Benefits Versus Other-Benefit Components. In: Journal of Marketing Management.
- **Stöcker, Björn; Baier, Daniel; Brand, Benedikt Martin (2021):** New insights in Online Fashion Retail Returns from a Customers' Perspective and Their Dynamics. In: Journal of Business Economics.