



MARTIN-LUTHER-UNIVERSITÄT
HALLE-WITTENBERG

The impact of motives, prices and norms on sustainable fashion consumption

Dissertation

Zur Erlangung des Doktorgrades der Philosophie (Dr. phil.)

vorgelegt

der Philosophischen Fakultät I

Sozialwissenschaften und historische Kulturwissenschaften

der Martin-Luther-Universität Halle-Wittenberg

von

Aneta Woznica

geb. am 18.05.1987 in Puck (Polen)



MARTIN-LUTHER-UNIVERSITÄT
HALLE-WITTENBERG

Erstgutachterin: Prof. Dr. habil. Gundula Hübner

Zweitgutachter: Prof. Dr. habil. Bernd Six

Verteidigungsdatum: 08.07.2021

Danksagung

Ich bedanke mich an dieser Stelle herzlich bei allen Menschen, die mich bei der Anfertigung dieser Dissertation unterstützt haben.

Zuerst möchte ich mich bei Prof. Dr. Gundula Hübner für die Begutachtung und Begleitung der Arbeit, konstruktive Kritik und wertvollen Anregungen bedanken.

Außerdem gilt mein Dank Dr. Johannes Pohl, der für Fragen immer offen war und mir wichtige Hinweise für die Auswertung der Daten gab.

Ebenso danke ich Frau Renken-Olthoff und Prof. Dr. Bernd Six für die Unterstützung.

Ein großer Dank gilt allen Studierenden, die die hier beschriebenen Studien unter Anleitung durchgeführt haben und den Versuchspersonen, die an den Experimenten teilgenommen haben.

Möglich wurde diese Dissertation durch meine Mitarbeit im Forschungsprojekt „Slow Fashion“. Dem Projektteam sowie dem Bundesministerium für Bildung und Forschung danke ich für diese Möglichkeit, die Anregungen und Unterstützung.

Content

I. Deutschsprachige Zusammenfassung	2
1. General Introduction – factors influencing sustainable behavior	9
1.1 Motives influence sustainable behavior	9
1.1.1 Concurrence of motives and prices for sustainable behavior	10
1.1.2 Motives and social influence can stimulate sustainable behavior	11
1.2 Study 1 - The interaction of price and motive in sustainable fashion consumption	11
1.3 Study 2 – The influence of social validation and motivation on sustainable fashion	12
consumption	12
2. Study 1 - The interaction of price and motive in sustainable fashion consumption	15
Abstract	15
2.1 Introduction	15
2.1.1 Slow fashion and factors influencing sustainable consumption.....	15
2.1.2 The role of motivation for sustainable choices	16
2.2 Experiment 1	17
2.2.1 Method	17
2.2.2 Results	20
2.2.3 Discussion	22
2.3 Experiment 2	23
2.3.1 Method	24
2.3.2 Results	26
2.3.3 Discussion	28
2.4 General Discussion.....	29
2.4.1 Limitations	30
2.4.2 Conclusion and implications for practitioners	30
3. Study 2 - The influence of social validation and motivation on sustainable fashion....	33
consumption.....	33
Abstract	33
3.1 Introduction	33
3.1.1 The influence of socialization agents on sustainable behavior	34

3.1.2 The influence of motives on sustainable behavior	35
3.2 The present research.....	35
3.3 Experiment 1	36
3.3.1 Overview	36
3.3.2 Method	36
3.3.3 Results	39
3.3.4 Discussion	41
3.4 Experiment 2	42
3.4.1 Overview	42
3.4.2 Method	43
3.4.3 Results	44
3.4.4 Discussion	47
3.5 Summary and General Discussion	48
3.5.1 Limitations and future directions	49
4. General Summary and Conclusion- Studies 1 and 2	51
4.1 Summary and Discussion	51
4.2 Conclusion.....	53
References	54

List of Figures

Figure 1. Three pairs of clothing with sustainable equivalents used in the first experiment of study 1	19
Figure 2. The interaction of motive and price in experiment 1 with Means and Standard Deviations.....	21
Figure 3. Interaction of motive and price in experiment1 with Means and Standard Deviations.....	22
Figure 4. Conventional and sustainable Cotton bags were sold in the sales tent.....	24
Figure 5. A nature picture elicited biospheric, a money-picture egoistic motives.....	26
Figure 6. Means and Standard Deviations for the intention to buy sustainable fashion in dependence of motive and price in experiment 2.....	27
Figure 7. The average slow fashion intention with Means and Standard Deviations in dependence of the sender and motive activation in experiment 1.....	40
Figure 8. The average slow fashion intention in dependence of sender and motive in experiment 2.....	46

I. Deutschsprachige Zusammenfassung

I. Deutschsprachige Zusammenfassung

Wenn wir uns motiviert fühlen, nachhaltig und umweltschonend zu konsumieren, geschieht das häufig, weil wir entweder unserer Umwelt und/oder uns selbst etwas Gutes tun wollen. Bilder, Videos oder Botschaften über die Natur erinnern uns an unsere Verbundenheit mit ihr, im Sinne einer biosphärischer Motivaktivierung. Bilder von Wettkämpfen, Geldscheinen oder Botschaften zum Schutze unserer Gesundheit stellen hingegen unser eigenes Potential und Weiterkommen in den Vordergrund. Dabei können egoistische Motive aktiviert werden.

Langjährige Forschungen zeigen, dass biosphärische Motive eine stabile Basis nachhaltigen Verhaltens darstellen (De Groot & Steg, 2009; Klein & Hilbig, 2018). Einen Widerspruch dazu bilden Ergebnisse zur Aktivierung von Statusmotiven (Sundie, Kenrick, Griskevicius, Tybur, Vohs & Beal, 2011, Puska, Kurki, Lähdesmäki, Siltaoja & Luomala, 2018). Seit 2010 gibt es zunehmend Studien darüber, dass egoistische Motive, wie Statusmotive, sich in Kombination mit einem leicht erhöhten Preis für nachhaltige Produkte sogar stärker als biosphärische Motive auf nachhaltiges Kaufverhalten auswirken können. Ein Grund für diese Forschungsergebnisse wird darin gesehen, dass die Zusatzkosten für ein nachhaltiges Produkt Status und Reichtum der Käuferin oder des Käufers signalisieren, also ein „kostspieliges Signal“ an andere Menschen senden. Der Ansatz, der dieses Phänomen beschreibt, heißt Costly Signaling Ansatz (Yadav, Tybur und van den Bergh, 2010). Die Bereitschaft, persönliche Einbußen hinzunehmen für ein höheres Ziel, wurde auch bei Tieren schon nachgewiesen (Zahavi, 1975). Trotzdem liegt die Vermutung nahe, dass dieses Phänomen Grenzen hat. Denn die meisten Menschen geben an, ihre Bereitschaft mehr für nachhaltige Produkte zu bezahlen, würde bei einem Preisunterschied für nachhaltige Produkte von 20-25% enden (Hiscox & Smyth, 2006; Ellis, McCracken & Skuza, 2012). Die Kenntnis dieser Grenze dürfte erklären, warum Studien, die Preisunterschiede in Kombination mit Statusaktivierung untersuchen, oft nur 20% Preisunterschiede im Blick haben (Griskevicius, Tybur & van den Bergh, 2010). Unklar ist daher, ab welchem Produktpreis die Grenzen der Statusmotivaktivierung erreicht sind. Auch ist bisher unklar, unter welchen Umständen egoistische und biosphärische Motive sich bei gemischter Motivaktivierung auf nachhaltigen Konsum auswirken. Gemischte Motivaktivierung stimuliert vor allem den Kauf von Bio-Lebensmitteln (Kareklas, Carlson & Muehling, 2014; Yadav, 2016). Hier scheint der individuelle Gesundheitsnutzen und der Nutzen für andere die Zielgruppe anzuspre-

chen. Bei anderen nachhaltigen Verhaltensweisen, beispielsweise sozialem Engagement, zeigen sich altruistische/biosphärische und egoistische Motive bei gleichzeitiger Aktivierung in einigen Studien als hinderlich. Während beim Kauf von Bio-Lebensmitteln nämlich durchaus Gesundheitsmotive mit dem Wunsch nach einer intakten Umwelt einhergehen können, können diese Motive sich bei sozialem Engagement widersprechen. Die Aktivierung verschiedener Motive löste in einigen Studien daher Reaktanz bei den Versuchspersonen aus und schwächte die Argumentation (Kiviniemi, Snyder & Komoto, 2002; Feiler, Tost & Grant, 2012; De Dominicis, Schultz & Bonaiuto, 2017). Auch scheinen unterschiedliche Techniken zur Motivaktivierung die Verhaltensintention unterschiedlich zu beeinflussen. Bilder bieten mehr Interpretationsspielraum als Botschaften und können sich wahrscheinlich indirekt auf das Verhalten auswirken. Bei Botschaften kommt es darauf an, wer sie kommuniziert. Insbesondere beim Konsumverhalten gibt es Hinweise darauf, dass junge Zielgruppen egoistische und normative Motive beim Einkaufen verfolgen. Ihnen scheint es wichtig zu sein, in ihrer Vergleichsgruppe anerkannt zu werden und Spaß beim Einkaufen zu haben. Das geht so weit, dass Freundinnen die Menge an gekaufter Kleidung und die Ausgabenbereitschaft beeinflussen können (Kurt, Inman & Argo, 2010). Demnach wäre es denkbar, dass soziale Anreize, wie Botschaften von nahen Freundinnen, die Wirksamkeit egoistischer Motive verstärken und sich positiv auch auf nachhaltigen Konsum auswirken könnten.

Um in meiner Dissertation die Grenzen der Motivaktivierung zu untersuchen, kombinierte ich Motive mit unterschiedlichen Kaufpreisen für nachhaltige Mode oder unterschiedlichen Sendern einer Botschaft und untersuchte ihren Einfluss auf nachhaltiges Konsumverhalten oder Nutzungsverhalten. Dazu wurden zwei Studien mit zwei Experimenten durchgeführt.

In der ersten Studie wurden Motive mit einem starken oder moderaten Preisunterschied für nachhaltige Mode kombiniert. Im Fokus stand die Frage, ob egoistische Motivaktivierung in Kombination mit einem höheren Preis nachhaltiger Mode verglichen mit konventioneller Mode, sich positiv auf den Konsum nachhaltiger Mode auswirken kann. Um dies zu überprüfen, wurde in einem ersten Experiment der Preis nachhaltiger Mode variiert (gleich oder doppelt so hoch wie der Preis konventioneller Mode) und mit Motivaktivierung gekoppelt. Mittels einer Botschaft wurden egoistische oder biosphärische Motive aktiviert. Getestet wurde der Einfluss dieser Motivaktivierung auf zwei Formen der Kaufintention- einer allgemeinen Kaufintention für nachhaltige Mode und der Gesamtauswahl nachhaltiger T-Shirts im Experiment. Wie erwartet zeigt sich sowohl für die allgemeine Kaufintention als auch für die Wahl nachhaltiger T-Shirts die erwartete Interaktion aus Preisunterschied und Motiv. Bei doppeltem Produktpreis

wirkte sich die egoistische Motivaktivierung am stärksten auf nachhaltigen Kleidungskonsum aus, bei gleichem Produktpreis die biosphärische Motivaktivierung. Unabhängig von der Motivaktivierung zeigte sich, dass der gleiche Produktpreis für nachhaltige und konventionelle Mode für die Auswahl nachhaltiger Mode ausschlaggebend ist. Andere Forscherinnen (z. B. Kibbe, Bogner & Kaiser, 2014) fanden an dieser Stelle einen Haupteffekt egoistischer Motive, der sich in meinem Experiment jedoch nicht zeigte. Der Grund dafür lag möglicherweise darin, dass das Priming über eine Botschaft zu schwach war. Sehr wahrscheinlich ist zudem, dass das Statusmotiv nur über den hohen Preis aktiviert wurde und damit schwächer war als in vergleichbaren Experimenten, weil meine Botschaft zur Aktivierung egoistischer Motive hauptsächlich die Vorteile von nachhaltiger Mode für die eigene Gesundheit in den Vordergrund stellte. Dass sich der Costly Signaling Ansatz auch auf Gesundheitsmotive beziehen lässt, ist jedoch ein neues Forschungsergebnis. Weil Bilder indirekt verhaltenswirksam sein können und Botschaften schneller Reaktanz auslösen könnte, wurde das Studiendesign in Experiment 2 überarbeitet. Um reales Kaufverhalten zu testen, wurden nachhaltige und konventionelle Mode-Accessoires, konkret modische Stoffbeutel, auf den Campi der Universität Halle-Wittenberg verkauft. Visuell ließen sich die Beutel nur durch ein Ökolabel unterscheiden. Statt Botschaften wurden Poster für die Motivaktivierung genutzt, welche in einem Verkaufszelt präsentiert wurden. Ein Naturposter aktivierte biosphärische und ein Geldposter egoistische Motive. In Experiment 2 wurde überprüft, ob sich der Effekt des Statusmotivs bei 20% und 60% Preissteigerung zeigt. Erwartet wurde der stärkste Effekt auf nachhaltigen Konsum unter der Bedingung Statusmotivaktivierung und 20% Preisunterschied.

Entgegen der Erwartung zeigte sich jedoch kein Effekt einer Interaktion aus Motiv und Preis auf den Verkauf nachhaltiger Stoffbeutel. Die Interaktion wirkte sich nur auf die Kaufintention aus, nachhaltige Mode zu kaufen. Wie in der Studie von Griskevicius und Kollegen (2010) zeigte sich aber, dass unter egoistischer Motivaktivierung und unter 20% Preisunterschied für nachhaltige Stoffbeutel signifikant mehr nachhaltige als konventionelle Stoffbeutel verkauft wurden. Dass die Interaktion sich nur auf die Intention und nicht das Verhalten auswirkte, kann möglicherweise durch eine im Vergleich zu Kleidung geringere Bedeutung der Stoffbeutel als Konsumobjekte erklärt werden. Dafür spräche, dass sich Preis und Motiv auf die Kaufintention auswirkten, die breit erfasst war und neben modischen Accessoires auch Kleidung inkludierte. Auffällig war, dass Statusmotive in Experiment 2 verhaltenswirksam waren, während der Effekt der Gesundheitsmotive in Experiment 1 zu schwach war, um sich als Haupteffekt auszuprägen. Status könnte, wie einige Studien vermuten lassen (z. B. Lindenberg & Steg, 2007),

grundsätzlich ein stärkeres Motiv im Vergleich zu Gesundheit für junge Zielgruppen darstellen. Dagegen wäre bei älteren Menschen eine stärkere Relevanz des Gesundheitsmotivs möglich.

In beiden Experimenten zeigte sich unabhängig von der Operationalisierung eine interagierende Wirkung von Preis und Motiv auf die Intention, nachhaltige Mode zu kaufen – nicht aber auf das Kaufverhalten. Die deutet auf weitere Einflussfaktoren der Kaufentscheidung hin. In beiden Experimenten zeigte sich, dass der Kaufpreis allein das Kaufverhalten beeinflusste. Demgegenüber stehen Ergebnisse, nach denen die gleichzeitige Aktivierung egoistischer und biosphärischer Motive nachhaltiges Verhalten stärker stimulieren kann als eine singuläre Aktivierung (Asensio & Delmas, 2015). In den vorliegenden Experimenten wurde nicht erfasst, ob es durch die Anwesenheit anderer zur Aktivierung sozialer Normen kam, die ebenfalls nachhaltiges Verhalten beeinflussen können (z. B. Iwanow, McEachern & Jeffrey, 2005; Thomas & Sharp, 2013), insbesondere bei Jüngeren wurde dies gefunden (Hiller Connell, 2009; Jayasankaraprasad & Kathyayani, 2014).

Um den Einfluss gemischter Motivaktivierung und einer Normaktivierung zu berücksichtigen, wurden in der zweiten Studie die gemischten Motive sowie soziale Normen aktiviert. Erwartet wurde eine additive Wirkung. Im ersten Experiment wurden egoistische und biosphärische Motive zusammen über eine Botschaft aktiviert. Diese Botschaft kam entweder von Freundinnen oder von den Veranstalterinnen eines Kleidertauschs, der im Januar 2017 stattfinden sollte. Der Besuch eines Kleidertauschs stellt für junge Menschen ein soziales Ereignis dar, zu dem üblicherweise Freundinnen mitgenommen werden (Armstrong, Niinimäki, Kujala, Karell & Lang 2015). Um die Glaubhaftigkeit der Freundinnen und Veranstalterinnen zu erhöhen, enthielt jeder Fragebogen einen Erfahrungsbericht der genannten Senderinnen darüber, wie ein Kleidertausch abläuft. Dabei handelte es sich um eine relativ neutral gehaltene „Gebrauchsanweisung“. Die Kontrollgruppe, die keine Motivaktivierung erhielt, bekam nur die Beschreibung über den Ablauf zu lesen. Erfasst wurde die Intention Second Hand Mode zu beziehen und die Intention den genannten Kleidertausch zu besuchen. Der erwartete Interaktionseffekt aus Motiv- und Normaktivierung zeigte sich jedoch nicht. Stattdessen wurde aber ein positiver Einfluss naher Vergleichspersonen, hier von Freundinnen, auf unsere Intentionen und unser Handeln bestätigt (Kurt, Inman & Argo, 2010; Matook, Brown & Rolf, 2015.).

Gemischte Interventionen können nachhaltiges Verhalten hemmen, wenn biosphärische und egoistische Motive sich widersprechen. So könnte das egoistische Motiv nach Status zu dem Motiv Ressourcen zu schützen im Widerspruch stehen. Dies könnte die Intention hemmen, Se-

cond Hand Mode zu beziehen. In Studien, die einen positiven Einfluss egoistischer und biosphärischer Motive auf nachhaltiges und/oder soziales Verhalten fanden, wurden Bilder (z. B. Zhang, Piff, Iyer, Koleva & Keltner, 2014) oder nur kürzere Botschaften (z. B. Jacob, Guéguen, Ardiccioni & Sénémeaud, 2013) als in der vorliegenden Studie verwendet. Möglicherweise sind Bilder und kurze Aussagen leichter zu verarbeiten und lösen weniger Reaktanz aus.

Ausgehend von diesen Überlegungen wurde das Studiendesign im letzten Experiment angepasst. Statt langer Botschaften wurden kurze Slogans zur Motivaktivierung eingesetzt – ein selbstfokussierter Slogan zur Aktivierung egoistischer Motive („Sie wollen etwas für sich tun?“) und ein Umwelt-Slogan zur Aktivierung biosphärischer Motive („Sie wollen die Umwelt schützen?“). Um die Slogans kurz zu halten, wurde auf den Erfahrungsbericht zur Normaktivierung verzichtet, es wurden allein die Kommunikationsquellen benannt (Freundin/Veranstalter). Egoistische und biosphärische Motive wurden separat aktiviert. Wie bereits in der ersten Studie zeigte sich ein Haupteffekt der separaten Motivaktivierung – jedoch anders als erwartet. Die Manipulationsüberprüfung zeigte, dass der Umwelt-Slogan nicht nur egoistische, sondern auch biosphärische Motive aktivierte. Beispielsweise gab es einen hohen positiven Zusammenhang mit dem egoistischen Motiv, das Leben zu genießen. Beide Motive beeinflussten die Intention Second Hand Mode zu kaufen und einen Kleidertausch zu besuchen signifikant. Normen wiederum konnten nicht aktiviert werden, es zeigte sich entsprechend kein Einfluss der Empfehlungen der Freundinnen oder Veranstalterinnen auf die Intentionen. Möglicherweise fehlte die Glaubwürdigkeit der Senderinnen, da hier kein Erfahrungsbericht mehr den Versuchspersonen die Gewissheit geben konnte, dass es sich um reale Menschen handelte. Glaubwürdigkeit ist aber für die Einflussnahme eine Voraussetzung (Gaied & Rached, 2010).

Die Befunde ähneln allerdings den Ergebnissen von Griskevicius und Kollegen (2010) sowie Sundie und Kolleginnen (2011) die zeigten, dass Statusmotive verknüpft mit Preisunterschieden von bis zu 20% nachhaltiges Konsumverhalten steigern. Die vorliegende Arbeit fügt hinzu, dass dieser Status Effekt auch noch bei doppeltem Preisunterschied wirksam ist.

Bisherige Forschungsergebnisse weisen biosphärische Motive als stabilste Basis umweltfreundlichen Verhaltens auf. Meine ersten beiden Experimente erweitern diese Erkenntnis darum, dass sich diese Stabilität bei auch beim Nutzungsverhalten von nicht-kommerziellen Angeboten zeigt, sich aber bei Konsumverhalten verliert und hier insbesondere Status aber auch Gesundheit, bei der jungen Zielgruppe, wichtiger sein können.

Das abschließende Experiment zeigte, dass Altruismus ein Eigeninteresse miteinschließen kann, wie Wesley Schultz (2002) in seinem Inklusionsmodell für Umweltbewusstsein zeigt und auch Kibbe und Kollegen (2014) bestätigen.

Zusammenfassend zeigen meine Studien für die Nutzung gemischter Interventionen aus Norm- und Motivaktivierung bzw. gemischter Motivaktivierung, dass sich diese nur auf Konsum- bzw. Nutzungsverhalten auswirkt, wenn sie indirekt erfolgt und nicht als Überzeugungsversuch wahrgenommen werden kann. Hervorgehoben wird durch die zweite Studie die Notwendigkeit, dass Vergleichspersonen glaubwürdig erscheinen müssen, in dem sie beispielsweise ihre Erfahrungen teilen, um positiven Einfluss auf eine Vergleichsgruppe ausüben zu können (Scalici & Schulz, 2014; Matook et al., 2015). Verstärkt würde der normative Einfluss wahrscheinlich, wenn deine Empfehlung von bekannten Freundinnen und Freunden käme (Grønhøj & Thøgersen, 2012). Eine solche personenzentrierte Art der Empfehlung wird beispielsweise über soziale Plattformen generiert, wie Facebook. Melden sich Nutzerinnen und Nutzer der Plattform für eine Veranstaltung an, wird die Bestätigung für die Veranstaltung automatisch deren Freundinnen und Freunden angezeigt, woraufhin sich diese entscheiden müssen, ob sie sich selbst auch für das gleiche Event anmelden. Würde diese Intervention zudem durch Motivaktivierung unterstützt, auf indirektem Wege, zum Beispiel mit Bildern, wäre der Effekt auf nachhaltiges Verhalten wahrscheinlich ausgeprägter. Hier können zukünftige Arbeiten anknüpfen.

General Introduction – factors influencing sustainable behavior

1. General Introduction – factors influencing sustainable behavior

With the acceleration of clothing production, the life of garment becomes shorter and fast fashion becomes even more popular. The negative environmental and human consequences of the trend encompass the loss of biodiversity (Aiama, Carbone, Cator & Challender, 2016), pollution of drinking water (Hwang, 2008) and human rights violations (Motlagh, 2014; Nyambura et al., 2018). To strive for a more sustainable future, clothing production must slow down (Gray, 2017). Additionally, sustainable clothing alternatives need to be invented (Gardemin & Kleinhüchelkotten, 2017). Sustainable clothing encompasses the three “Rs” *reduce, reuse and recycle* (Oskamp, 1995). Unfortunately, positive attitudes towards growing efforts in sustainability (Scholl, Gossen, Holzhauer & Schipperges, 2016) are often accompanied by certain negative beliefs about sustainable clothing consumption, such as being too expensive or having an alternative or eco-appearance (Connell, 2009, 2010). According to Cognitive Dissonance Theory (Festinger, 1957) changes targeting beliefs or behavior can resolve the mental discomfort, which results from those conflicting beliefs. To better understand and promote sustainable behavior, the impact of attitudes and social norms is analysed in the field of environmental psychology (Whitmarsh & O'Neill, 2010; Melnyk, Herpen & Trijp, 2010; Steg, Lindenberg & Keizer, 2016; Leygue, Ferguson & Spence, 2017). Attitudes and norms are focused, because they belong to the most important predictors of pro-environmental behavior (Han & Hansen, 2012; Klöckner, 2013).

1.1 Motives influence sustainable behavior

To influence behavior by using attitudinal determinants, researchers have started to investigate the influence of different motives on our behavior (Steg, Groot, Dreijerink, Abrahamse & Siero, 2011; Steg et al., 2014). Motives base on values. Values are general, transsituational guiding principles of life (Schwartz, 1992). Sometimes, values and motives are used interchangeably in literature (Magnusson, Arvola, Hursti, Åberg & Sjöden, 2003; ¹Steg, Perlaviciute, Van der Werff & Lurvic, 2014). This dissertation differentiates global values after Schwartz (1992) and examines motives as driving forces of sustainable behavior (Rokeach, 1973), which base on global values. Motives can influence sustainable behavior indirectly, mediated by beliefs (Ajzen, 1991; Dreezens, Martijn, Tenbült, Kok & De Vries, 2005), norms and intentions (Steg et al., 2011). People who strongly endorse egoistic motives, focus mainly on self-interests. In the context of clothing consumption, this means that egoists often focus on the appearance and

price of clothing (Iwanow, McEachern & Jeffrey, 2005). However, egoistic motives can stimulate environmental consumption behavior too – in case that behavior is connected to increases in status (Griskevicius, van den Bergh & Tybur, 2010). Opposite, people who strongly endorse biospheric or altruistic values often focus on the environmental and social aspects (Gilg, Bar & Ford, 2005). Both, biospheric and altruistic motives have the power to stimulate pro-social (Gasiorowska, Zaleskiewicz & Wygrab, 2012; Zhang, et al., 2014) and pro-environmental behavior (Zelenski, Dopko & Capaldi, 2015; Birch, Memery & Kanakarathne, 2018). Egoistic motives however are found to stimulate solitary activities and competitive behavior (Vohs, Mead & Goode, 2008) as well as pro-environmental behavior, if nature appreciation is linked to personal benefits (Kibbe, Bogner & Kaiser, 2014). However, the observed impacts of mixed biospheric and egoistic motive activations are inconsistent (Ranganath, Spellman & Joy-Gaba, 2010; Kareklas, Carlson & Muehling, 2014; van den Broek, Bolderdijk & Steg, 2017). It seems, mixed motivation interventions do increase sustainable consumption if they match (De Groot & Steg, 2009) and none of the messages used for activation has a negative connotation (Bolderdijk, Steg, Geller, Lehman & Postmes, 2013).

1.1.1 Concurrence of motives and prices for sustainable behavior

Besides pro-environmental motivation, the motivation to compete with others can affect sustainable consumption too (Sundie, Kenrick, Griskevicius, Tybur, Vohs & Beal, 2011). The intention to buy sustainable products is found to be highest, if prices for sustainable products are increased by 20% compared to conventional products and under the condition of a public purchase (Griskevicius et al., 2010; Puska, Kurki, Lähdesmäki, Siltaoja & Luomala, 2018). This is contrary to the assumption that higher prices are an obstacle for sustainable consumption (Connell, 2010; Eckhardt, Belk & Devinney, 2010; Moser, 2015). On the other hand, it fits to the finding that people connect higher prices for sustainable products to personal benefits (Magnusson, Arvola, Koivisto Hursti, Åberg & Sjöden, 2001, 2003; Birch, Memery, & Kanakarathne, 2018). Though whether a price is accepted or not, also depends on the perceived fairness of the price (Weinstein, Balmford, Dehaan, Gladwell, Bradbury & Amano, 2015) and the income (Csutora, 2012). Nevertheless, recent research concludes that self-focused motives can increase the intention to act sustainably compared to environment-focused motives (Mueller, Sirieix & Remaud, 2011; Kibbe et al., 2014). To date however, research has hardly examined the influence of different motives and prices separately.

1.1.2 Motives and social influence can stimulate sustainable behavior

Besides motivation and purchasing prices for goods, social influences seem to affect our consumption behavior considerably (Nolan, Schultz, Cialdini, Goldstein & Griskevicius, 2008). Recommendations from peers may communicate what they do and what they approve – activating descriptive and injunctive norms. Descriptive norms have been found to increase sustainable consumption (Demarque, Charalambides, Hilton & Waroquier, 2015) and different other forms of pro-environmental behavior (Schultz, Nolan, Cialdini, Goldstein & Griskevicius, 2008; Goldstein, Cialdini & Griskevicius, 2010; Fornara, Carrus, Passafaro & Bonnes, 2011; Grønhøj & Thøgersen, 2012). They can increase behavior directly and indirectly through their impact on intentions (Melnik et al., 2010). Injunctive norms are added to avoid boomerang effects of descriptive norm-activation (Schultz et al., 2007). Behavior can be influenced by close peers (Mangleburg, Doney, & Bristol, 2004; Keresztes, Piko, Pluhar & Page, 2008), leaders (Afsar, Badir & Kiani, 2016) or even strangers (Gaied & Rached, 2010). However, while experts may affect our decisions by their expertise, friends and family members may affect our decisions because they are close to us - which makes them more trustworthy (Robertson & Barling, 2013; Matook, Brown & Rolf, 2015). However, no study to the best of our knowledge has yet examined the influence of different motives and peers on sustainable behavior.

To close this gap and gain deeper understanding of the interaction of social influence and motive activations, two studies including two experiments each were conducted. The studies aimed to analyse the power of different behavior change interventions combining activation of motives, social influence and varying prices for sustainable textiles. First, we examined egoistic and biospheric motives in combination with different prices for sustainable clothing. Next, we tested the influence of egoistic and biospheric motives on the purchase of second-hand clothing and the visit of clothing swaps in combination with social influence, exerted by different peer endorsers. Our sample consisted of University students, because people with higher education are the main target group for sustainably produced clothing (Laroche, Bergeron & Barbaro-Forleo, 2003; Verhoef & van Doorn, 2016), because they report a high openness for slow fashion behaviors and buy huge amounts of clothing (Kleinhüchelkotten, Neitzke & Moser, 2016).

1.2 Study 1 - The interaction of price and motive in sustainable fashion consumption

More and more studies conclude that self-benefits may be better motivators to stimulate sustainable consumption compared to environment-focused benefits, especially if the purchase of

sustainable goods is linked to increases in status, because it is accompanied by a higher price compared to conventional goods (Griskevicius et al., 2010; Sundie et al., 2011). The borders of motivation are however not clear. For example, no study has yet examined at which price difference the impact of status motivation decreases. The aim of Study 1 was therefore to test the impact of egoistic and biospheric motivation and different prices on the intention to buy sustainable clothing and the choice of sustainable clothing.

Experiment 1 examined this question activating egoistic or biospheric motivation accompanied by the same or double price for sustainable clothing. Motives were activated using messages as in Jacob, Guéguen, Ardiccioni and Sénémeaud (2013). Experiment 2 complemented Experiment 1 by narrowing the price difference between sustainable and conventional textiles. Because Experiment 1 started with a price difference between 0% and 100%, Experiment 2 added price differences of 20% and 60% between sustainable and conventional textiles for a complete examination of the interaction of motives and prices. Furthermore, instead of messages, Experiment 2 tested pictures to activate motives to add a less obvious, emotional approach for motive activation (Zhang et al., 2014).

Finally, Experiment 1 examined the intention to buy sustainable clothing and hypothetical choice for sustainable textiles, while Experiment 2 implemented the intervention in real selling situation. However, instead of t-shirts, identical sustainable and conventional cotton bags were used, because Experiment 2 aimed to shift the intervention into practice and it is more likely to find identical sustainable and conventional cotton bags compared to identical sustainable and conventional clothing.

1.3 Study 2 – The influence of social validation and motivation on sustainable fashion consumption

To encourage pro-environmental choices, some authors suggest strengthening normative goals and make normative and hedonic or gain goals more compatible (Lindenberg & Steg, 2007; Steg, Bolderdijk & Keizer, 2014), because many environmental behaviors involve a conflict between hedonic and normative goals. For example, the normative goal to contribute to a toxic-free environment may be incompatible with the hedonic goal to seek direct pleasure by chasing for bargains. Nevertheless, no study has yet examined the effect of messages, which activate motives and social influence in a compatible way to promote sustainable behavior. Therefore, Study 2 tested the influence of different social peers combined with egoistic and/or biospheric motives for the use of sustainable clothing. Study 2 completed Study 1 by testing rather non-

commercial activities to stimulate sustainable consumption: Instead of the purchase of clothing, the intention to obtain second-hand clothing and visit a clothing swap event was examined. Also, because there are studies arguing that mixed egoistic and biospheric messages are better promoters of pro-environmental behaviors than separated egoistic and biospheric messages (Kareklas, Carlson & Muehling, 2014) and studies showing that separated instead of mixed messages have stronger positive behavior effects (Feiler et al., 2012), mixed egoistic and biospheric motives were tested in Experiment 1 and separated egoistic and biospheric motives were tested in Experiment 2. To add the influence of different peers, motivation was accompanied by the influence of a friend and the organizers of a clothing swap to promote sustainable clothing usage in Experiment 1. In Experiment 2, more identifications were allowed using “friends” instead of a friend as peer influencer and the organizers of the swap event. In both experiments, these social peers recommended an upcoming clothing swap event in Hamburg. Experiment 1 tested a recommendation including an experience report of the peer endorsers to increase their credibility (Scalici & Schulz, 2014), Experiment 2 used slogans instead of messages for a recommendation, because due to the Elaboration-Likelihood Model (ELM, Petty & Cacioppo, 1983) a short and concise language can support persuasive appeals.

Study 1

The interaction of price and motive in sustainable fashion consumption

2. Study 1 - The interaction of price and motive in sustainable fashion consumption

Abstract

To reduce the environmental and social costs of fast fashion, sustainable clothing needs to become more attractive for costumers. Empirical findings suggest that personal benefits, such as increases in status, stimulate sustainable consumption if linked to a higher price for sustainable items. Experiment 1 ($N = 199$) tested the impact of motivation and price on the consumption on sustainable textiles. Egoistic or biospheric motives were activated, combined with sustainable textile prices equal or double to conventionals'. Sustainable choices seemed most attractive at the same price level but in accord with former research price level and motivation interacted: Higher priced sustainable clothing was preferred when personal benefits were pronounced. Environmental benefits had a stronger impact under the equal price condition. Experiment 2 ($N = 126$) tested the intervention in a real sales context with a smaller price range. The findings indicated the superiority of personal benefits for high-priced sustainable fashion and a smaller prices in general.

2.1 Introduction

2.1.1 Slow fashion and factors influencing sustainable consumption

Although the natural resources are declining, consumption is increasing. For example, the worlds' average consume of textiles is 8kg per capita and year. Germans (20 kg) burden the environment with almost the double (Greenpeace, 2015). The consumption of fast fashion shortens the life cycle of the garment and thereby leads to environmental degradation (Kant, 2012; Cobbing & Vicaire, 2017). To stop the negative consequences of fast fashion and foster slow fashion, decelerations in the fashion sector, fair and sustainable produced clothing and an overall reduction in consumption are required (Griggs, Stafford-Smith, Gaffney, Rockström, Öhman, Shyamsundar & Noble, 2013).

One of the barriers to sustainable consumption are comparatively a higher product-prices (Connell, 2010, 2011), as the acceptance to pay a premium is generally low (Gam, Cao, Farr & Kang, 2010). Health-conscious consumers accept to pay up to 22% more for organic wine (Brugarolas Mollá-Bauzá, Martínez-Carrasco, Martínez-Poveda & Pérez, 2005) and 25% more for organic clothing (Ha-Brookshire & Norum, 2011, Ellis, McCracken & Skuza, 2012). This willingness results from the idea that sustainable items are good for health, bring self-

esteem and value for money (Magnusson, Arvola, Hursti, Åberg & Sjöden, 2003; Lundblad & Davies, 2016).

Linking the toxics of conventional clothing to health outcomes brought attention to the Greenpeace Detox Campaign and put pressure on retailers (Greenpeace, 2018). Additionally, violations of the textile workers rights and environmental damages due to clothing industries have become more obvious (Hobbes, 2015, Miranda, 2016; Perria, 2018). However, despite this knowledge and although biospheric motives seem to provide the most stable base for sustainable behavior (De Groot & Steg, 2008), only a minority of people chooses sustainable products for environmental reasons (Gilg, Barr & Ford, 2005; Gam, et al., 2010). Instead, current publications show that egoistic values maybe a source for sustainable behavior if nature appreciation is linked to personal benefits (Kibbe et al., 2014; Lundblad & Davies, 2016). Personal benefits of sustainable choices may even outweigh the hurdle of increased prices for sustainable products (Griskevicius, van den Bergh & Tybur, 2010; Puska, Kurki, Lähdesmäki, Siltaoja & Luomala, 2018). How large the price differences can be before personal benefits loose their power to stimulate sustainable product choices remains an open question, so far.

2.1.2 The role of motivation for sustainable choices

A common assumption is that consumers avoid buying products of a certain company, if they are knowledgeable about harmful environmental business strategies of that company (Choi & Ng, 2011). However, as the boosting sales of Primark after the Rana Plaza accident (Motlagh, 2014) show, reality tells a different story. It tells the story of consumers who are mainly interested in the appearance and price of clothing (Iwanow, McEachern & Jeffrey, 2005). The main drivers of over-consumption seem to be experiential needs and hedonic motivation (Jayasankaraprasad & Kathyayani, 2014; Jen-Hung & Yi-Chun, 2010; Thøgersen, 2014) – self focused interests. However, self-interest seems to have the power to strengthen sustainable consumption. Several studies provide empirical evidence for egoistic motives to strengthen sustainable consumer choices when linked to personal benefits (Griskevicius et al., 2010; Kibbe et al., 2017; Mueller, Sirieix & Remaud, 2011; Puska et al, 2018; Yadav, 2016).

At the same time, biospheric motives were found to affect different kinds of pro environmental and social behaviors such as to check a cars' tire pressure (Bolderdijk, Steg, Geller, Lehman & Postmes 2013), donate money to environmental organizations (Klein & Hilbig, 2018) or help others (Zhang, Piff, Iyer, Koleva & Keltner, 2014). Counterintuitively, addressing egoistic and biospheric motives together has led to mixed results. While the combined motive

activation successfully stimulated behavior in some studies (Kareklas, Carlson & Muehling, 2014), emphasizing both motives may have reduced the argumentation strength in others, because it increases the awareness that a persuasion attempt is made (Feiler, Tost & Grant, 2012). Further, personal benefits seem to attract ego focused and more altruistic persons likewise, while environmental benefits persuade the latter only (De Dominicis, Schultz & Bonaiuto, 2017). Consequently, we assume a stronger impact of egoistic motivation on sustainable consumer choices compared to biospheric motivation. Based on the costly signaling approach (Griskevicius et al., 2010), this impact is expected to be strongest when combined with relatively higher prices. The accepted relative price difference might vary between products. For example, the product-price is one of the most important decision criteria for the purchase of textiles (Chen-Yu & Seock, 2002; Eckhardt, Belk & Devinney, 2010). Therefore, in the case of sustainable clothing it seems likely that the impact of personal benefits is stronger when the price difference to conventional ones is relative smaller.

To test the price level and motivational influences on sustainable fashion consumption, we conducted two experiments. In Experiment 1 we analysed intentions and hypothetical choices, Experiment 2 was a field-experiment in a real-life selling situation.

2.2 Experiment 1

In the first experiment, we tested the impact of egoistic versus biospheric motive activation in combination with a large price difference between sustainable and conventional t-shirts. In line with former findings (e.g., Kibbe et al., 2014; Mueller et al., 2011) we expected egoistic motives to enhance the choice of sustainable textiles compared to biospheric motives (H1). Furthermore, we expected the same rather than a comparatively high price to stimulate the choice for sustainable t-shirts (H2). Third, following the costly signaling approach (Griskevicius et al., 2010; Puska et al., 2018) we assumed the combination of a higher price and egoistic activation to promote sustainable choices strongest (H3).

2.2.1 Method

Participants

From N = 238 participants, a sample of N = 199 with complete data was left. Of that sample, 67% were women. Participants were 18 to 35 years old ($M = 23.41$, $SD = 3.96$). 65% of participants were students from a variety of fields - 38% humanities, 7% Health sciences and medicine. Other fields were represented with less than 9%, for example lectureship, engineering and

cultural sciences. They were recruited from the University of Hamburg, and the MSH Medical School Hamburg. Most of them (83%) lived in Hamburg or surrounding areas.

Questionnaire and procedure

A questionnaire was used to conduct the experiment and obtain the data. The questionnaire was distributed during classes, no participation rewards were provided. After a short welcome and introduction by the experimenter the questionnaires were distributed. The first page of the questionnaire informed the participants that they were participating in a survey about clothing and consumption. We assessed the sociodemographics, followed by a definition of sustainable fashion. On the third page, participants were told to imagine the opening of a new shop in their favorite place of purchase with conventional and sustainable clothing. The social and environmental standards of the GOTs label, which labelled sustainable clothing, were listed below. The next part included a message to elicit either egoistic or biospheric motives, accompanied by the t-shirt choice task. Participants were asked to choose two out of six identical t-shirts, three labeled as sustainable and three as conventional; the sustainable shirts were distinguished from the conventional by the GOTs-Label. These t-shirts were presented as photos (Figure 1). The t-shirts were retrieved from the online shop “Grundstoff” (<https://www.Grundstoff.de>), which sells sustainable basic clothing. Identical t-shirt designs were chosen to avoid moderating effects of clothing color, label and cut.

Design and operationalisation

We investigated motive activation (egoistic vs. biospheric) and price (same vs. double price) in a 2x2 design. To control for a possible gender impact on sustainable behavior (e.g., Isenhour, & Ardenfors, 2009; Tripathi & Singh., 2016) gender was included as a covariate. Participants were randomly assigned to one of the four conditions with 37 to 60 persons per condition. As indicator of behavior we calculated the sum of chosen sustainable t-shirts. Additionally, we used two measures of intention. The slow fashion intention was a five-item measure retrieved and adapted from Kim, Lee and Hur (2012) and included the willingness to buy, recommend or defend sustainable clothing choices (1 = never to 5 = always). The mean over these items was used as indicator of the slow fashion intention ($\alpha = .78$). Additionally, the first item of that scale, which captures the willingness to buy sustainable clothing for oneself, was analysed separately as a measure for the individual purchase intention. Gender was used as control variable,

because studies report higher intentions for pro-environmental behavior for women (Zelezny, Chua & Aldrich, 2000; Luchs & Mooradian, 2012).

For the price differences it was decided to use the original prices of the retailer “Grundstoff” for sustainable clothing, since they are sellers of sustainable clothing only. Conventional clothing was offered at the same or at half cost of sustainable clothing.

The stimulation of motives was leaned on Steckenreuter and Wolf (2013) and Jacob and colleagues (2013). Written messages were used to pronounce the benefits of sustainable clothing for the self or the environment.

Egoistic motives: To stimulate egoistic motives the following information on the personal health benefit by using sustainable t-shirts was provided: “Conventionally produced clothing is treated with chemicals, toxic traces are detectable from the pipe to the t-shirt. The tiniest traces can be dangerous for our health. Chemicals, for example nonyephenolethoxylates, were found in the sportswear of some well-known brands. They accumulate in the food chain and are hormonally effective. Through the purchase of sustainable clothing you contribute to the preservation of your health”.

Biospheric motives: Under biospheric motive condition we linked environmental preservation and sustainable consumption: „Conventional clothing is mostly fabricated under poor working conditions and insufficient payment. 1/3 of the China’s rivers are contaminated. This practice accelerates species extinction and shriks drining water reserves. Accordingly, the fashion colors are predicted by the colors of the rivers. Through the purchase of sustainable clothing you contribute to the preservation of species and the environment.”



Figure 1. Three pairs of clothing with sustainable equivalents used in the first experiment of study 1.

To test the effectiveness of the motive activations one item each assessed the agreement on a uni-polar rating scale (1=strongly disagree to 5= strongly agree) with the statement “Mankind was created to rule over the rest of nature” for egoistic and “Plants and animals have as much right as humans to exist” for biospheric motives. The items were retrieved from the “New Environmental Paradigm Scale” from Dunlap, Van Liere and Jones (2000). They report to have

found three dimensions of the scale „focus on beliefs about humanity’s ability to upset the balance of nature (1), the existence of limits to growth for human societies (2) and humanity’s right to rule over the rest of nature (3).” However, because the internal consistency of those scales based on that dimensions was not sufficient in Experiment 1 (cronbach’s alpha = .35 - .61), we decided to use single items to check the motive manipulation.

2.2.2 Results

Using a three-way ANCOVA with gender as covariate we investigated our assumptions for the slow fashion intention and the choice of sustainable t-shirts. Post-hoc analysis of variance followed to test whether the results for the intention to buy sustainable clothing only for oneself differed from the slow fashion intention.

Manipulation Check

In a first step, we tested the motive manipulation. Unexpectedly, the manipulation check was neither significant for egoistic ($F(1, 197) = .05, p = .82$) nor for biospheric motives ($F(1, 197) = .92, p = .34$). Independent of the motive activation interventions, the mean egoistic motive ($M = 1.81, SD = 1.09$) appeared to be low but high for biospheric motives ($M = 4.47, SD = 0.86$). That means although the intervention had no significant influence on the idea that plants and animals have as much right as humans to exist, biospheric motives seemed to be salient.

Intentions

Against expectation, we found no evidence for a main effect of egoistic motive activation (H1). The slow fashion intention was equally low under the condition of egoistic ($M = 2.52, SD = .60$) and biospheric ($M = 2.60, SD = .70$) motive activation ($F(1, 198) = 1.17, p = .28$). Likewise, the assumed impact of a lower price could not be observed (H2; $F(1, 198) = 0.23, p = .63$). Under both conditions, the slow fashion intention was moderate ($M = 2.51$ for the same and $M = 2.57$ for the higher price condition). We obtained a similar result for the intention to buy sustainable clothing for oneself (Motive: $F(1, 198) = 2.12, p = .15$, Price: $F(1, 198) = 0.41, p = .84$). The average intention varied from $M = 2.34$ to $M = 2.45$.

The data provided no evidence for an interaction effect in case of the slow fashion intention ($F(1,198) = 0.48, p = .49$). However, we found an interaction of price and motive for the intention to buy sustainable clothing for oneself ($F(1,198) = 7.12, p = .01, \eta^2 = .04$). When prices were equal, biospheric motives led to a higher intention to buy sustainable clothing for

oneself ($M = 2.62$, $SD = .10$) than egoistic motives ($M = 2.18$, $SD = .10$). Opposite, when prices were higher, egoistic motives increased the intention to buy sustainable clothing for oneself more than biospheric ($M = 2.49$, $SD = .12$ vs. $M = 2.36$, $SD = .11$). Comparing the high-priced egoistic with the other three conditions according to H3, pairwise comparisons revealed marginally significant results for the comparison with the egoistic same-price condition ($p = .07$) and insignificant results for the other conditions ($p = 1.0$). H3 was therefore not confirmed. Gender did not have a significant impact ($F(1, 198) = 2.04$, $p = .16$). Figure 2 illustrates the results.

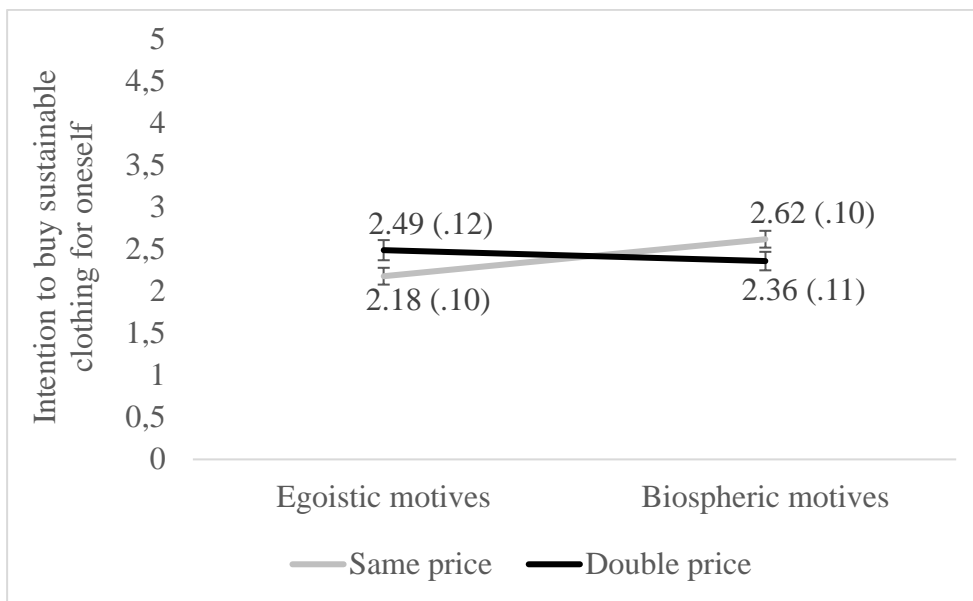


Figure 2. The interaction of motive and price in experiment 1 with Means and Standard Deviations. Under the same price, biospheric motives led to a higher intention to buy sustainable clothing for oneself, under the double price, egoistic motives increased the intention.

We had expected egoistic motives to outperform biospheric motives (H1), but motives alone had no effect on choice behavior ($F(1,198) = 0.00$, $p = .98$). Under both motive conditions participants chose 1,6 sustainable t-shirts on average ($SD = .07$ for both motives). However, the expected main effect for price (H2) was confirmed ($F(1,198) = 18.20$, $p < .00$, $\eta^2 = .09$): Sustainable choices increased under the same-price condition ($M = 1.83$, $SD = .06$) compared to the higher price ($M = 1.43$, $SD = .07$). Moreover, we found an interaction of motive and price ($F(1,198) = 3.06$, $p = .04$; $\eta^2 = .02$), Figure 3). When the price was doubled the average number of chosen sustainable t-shirts was slightly higher under the egoistic compared to biospheric conditions ($M = 1.51$, $SD = .12$ vs $M = 1.35$, $SD = .10$). In case of the same price it was slightly higher under the biospheric compared to egoistic condition ($M = 1.91$, $SD = .08$ vs $M = 1.75$, $SD = .08$). In the pairwise comparison, the price was clearly the most important factor, because

the high-price conditions under both motivations did not differ significantly ($p = 1.00$). Sustainable t-shirt choice increased significantly under the biospheric same-price condition ($p < .01$) and marginally under the egoistic same-price condition ($p = .06$) compared to the egoistic high-price condition. We suggested a superiority of the egoistic high-price condition in H3, this assumption was not verified. Again, gender had no influence on sustainable choices $F(1,198) = 1.41, p = .248$.

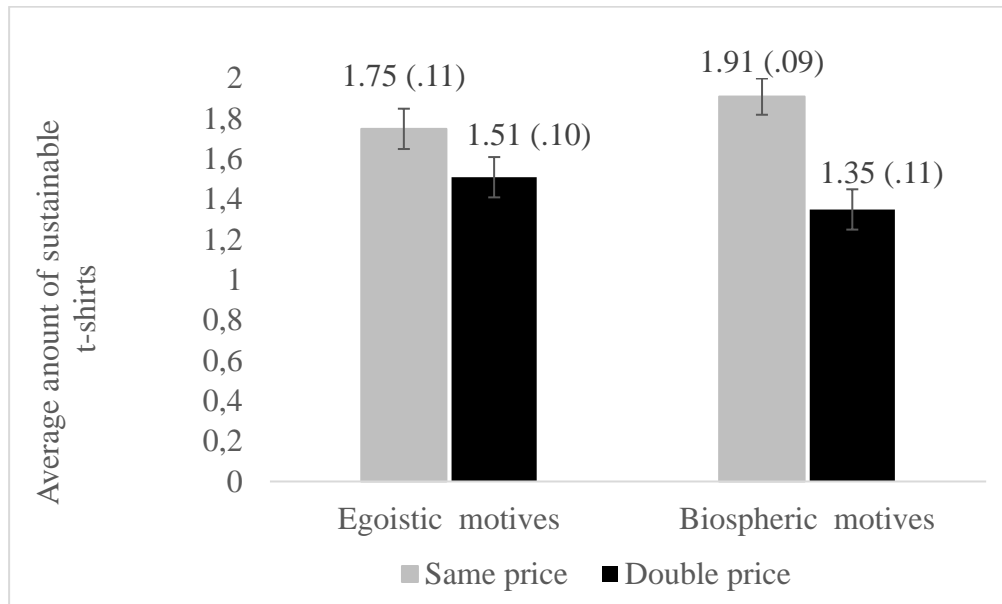


Figure 3. Interaction of motive and price in experiment1 with Means and Standard Deviations. In average, most sustainable t-shirts are chosen under biospheric motives and the same price condition but if the price is doubled, egoistic motives are stronger motivators than biospheric motives

2.2.3 Discussion

In accord with earlier research (e.g. Griskevicius et al., 2010) egoistic motives combined with high priced sustainable shirts led to an increased intention to buy sustainable fashion for oneself compared to the biospheric priming stimulating. This is even more interesting as the Manipulation Check revealed that biospheric motivation was also salient during the experiment but affected the intention only under lower price conditions. This finding was however not mirrored in the consumer choices –the sustainable t-shirts seemed to be even more attractive when their price was equal to the conventional – independently of the motive activation. This was also visible in the pairwise comparisons, where the same price conditions increased choice behavior significantly compared to the higher price conditions, independent of the motivation. This main

effect of the same price was observed for the actual choice behavior, only. Probably, the price difference of 100 % was too large when it came to an actual choice.

Another explanation could be that we presented identical t-shirts – with the information on the GOTS-Label as the only distinction. Therefore, in the absence of the egoistic motives the choice for cheaper sustainable t-shirts was rational as the higher price was not connected to the personal health benefit justifying the price. Still, focused on biospheric motives the sustainable shirts were attractive as they signal environmental benefits (Corral-Verdugo, Mireles-Acosta, Tapia-Fonllem & Fraijo-Sing, 2011).

The composite slow fashion intention remained unaffected by any intervention. Certainly, this is not surprising as the principle of correspondence was violated and the intervention likely not strong enough to influence such a general intention. More important, we did not find evidence for a stronger impact of focused egoistic compared to biospheric motives. One explanation for this missing result might be an ineffective manipulation strategy. However, as we did not observe the expected interaction effect it is more likely that the items used for the manipulation check have been invalid or not sensitive enough to capture the priming effects. As the average of the assessed egoistic statement was rather low but very high for the biospheric the answers given may have been socially desirable. Additionally, the written manipulation messages may have been a too obvious manipulation attempt and therefore may have stimulated biased answers. To overcome the discussed shortcomings of the first experiment and to further analyse the price relation impact we conducted a second experiment.

2.3 Experiment 2

In Experiment 2, firstly we changed our motive activation approach. Instead of written texts, referring to former research we used a less obvious emotional approach, more specific, images of beautiful nature for biospheric (Zhang, et al., 2014) and pictures of money for egoistic motive activation (Vohs, Mead & Goode, 2008). Secondly, to further test the possible borders of a price difference between sustainable and conventional textiles we reduced the price difference between sustainable and conventional textiles from the 100 % increase in Experiment 1 to a 60 % and 20 % increase for sustainable textiles. A 20% increase in price was for example also used by Griskevicius and colleagues (2010).

Thirdly, to overcome the problem of using identical shirts, we change to fashion accessories. We found stylish gym bags made of cotton, rather fashionable at that time. These cotton bags were merchandise products of that university, at which we conducted our experiment. The

University offered two identical versions of these bags (Figure 4), one conventionally produced, the other sustainably. The sustainable bags could be distinguished by a Fair-Trade Label, only. Fourthly, supported by the university shop we conducted a field experiment allowing us to assess actual consumer behavior in a real-life situation.

In accord with Experiment 1, we assumed a significant increase in the slow fashion intention and a higher percentage of purchased sustainable cotton bag under an egoistic motive activation compared to biospheric, independent of the price (H1). Additionally, in the case of sustainable textiles we expected a main effect of a lower 20 % price difference compared to a higher 60 % (H2). Third, we assumed an interaction of the motive activation and price difference: The intention and behavior should be most pronounced under the 20% price difference combined with egoistic motives compared to the other three conditions (H3), because people often report to be willing up to 20% more for sustainable items (Hiscox & Smyth, 2006, Ellis, McCracken & Skuza, 2012). However, it should be also visible under the 60% and egoistic condition due to the costly signaling approach.

2.3.1 Method

Participants

Hundred and twenty-six participants (80 women) took part in the field experiment, a majority of 92% were students from a variety of subjects (12.7% Health sciences, 10.3% economics, 8% lectureship, 8% history, others were present with less than 7%); 8% were University staff.

Materials and procedure

A short, one-sided questionnaire was used to obtain data. Participants visiting a sales tent received that questionnaire after they purchased or reported to be willing to purchase one or more



Figure 4. Conventional (left) and sustainable (right) Cotton bags were sold in the sales tent

of the bags. It captured the participant's decision for a sustainable or conventional cotton bag, sociodemographics, and the intention to use slow fashion. The purchase took place in a sales tent on three different campuses of that certain university (Figure 4).

Design and operationalisation

We conducted a 2 x 2 between-subject design with motive and price; gender was controlled as a covariate. Each of the four conditions was occupied with at least 25 to maximum 35 participants. The price of sustainable bags was increased by 20% or 60% in comparison to the conventional version. At the same time, this relation created a realistic setting: Fair produced bags were usually sold with an increase of 20 to 25% percent (www2.shop.uni-halle.de) which we chose as our lower limit. Other sustainable shops sold printed bags, similar in size, material and color with an increase of 100 -150% (<https://www.avocadostore.de>). As the bags were a merchandise product of that certain university, a doubled price might have appeared suspicious. Therefore, we agreed on 60 % as the upper limit.

Our dependent variables were the intention to buy sustainable fashion and the amount of sold sustainable bags. Additionally, we added "planned purchases" in case the preferred bag was sold out or the person missed enough change (card payment was impossible). In that case we made a note on the questionnaire which bag the participant wanted to buy.

For reason of comparison, analog to Experiment 1 the slow fashion intention, was assessed by three items (intention to buy sustainable clothing for myself; recommend sustainable clothing, defend sustainable clothing if others hold negative opinions). The mean over these items ($\alpha = .80$) served as a composite intention indicator. As cotton bags are fashionable accessories', this slow fashion indicator seemed appropriate.

The motive activation material was retrieved from the website "pixabay" (<https://www.pixabay.com/de>). A picture of nature was chosen to elicit biospheric, a money-picture for egoistic motives (Figure 5). Those pictures were comparable to pictures used by other studies Zhang et al., 2014). These posters were presented in the back of the sale tent (Figure 5) and the conditions changed every two hours.



Figure 5. A nature picture elicited biospheric, a money-picture egoistic motives¹

2.3.2 Results

We performed an ANCOVA to analyse the assumed impacts on the intention. Purchases and planned purchases were analysed by the chi square test for goodness of fit and contingency tables. The chi square test for goodness of fit was used to test the assumptions H1 and H2. For the interaction H3, Contingency Tables were performed. To compare groups by the chi square test for goodness of fit, we had to multiply the cell frequencies by a fixed factor for a balanced design, because the number of participants in each condition varied from 25 to 35.

Intention

On average, the intention to use slow fashion was in the middle range of the rating scale ($M = 2.30$, $SD = 0.79$). The expected main effect of the egoistic motive activation (H1) was confirmed for the slow fashion intention ($F(1,125) = 4.85$, $p = .03$, $\eta^2 = .04$): Addressing egoistic motives compared to biospheric led to significantly higher intentions ($M = 2.42$, $SD = .73$ vs. $M = 2.19$, $SD = .83$). Opposite, contrary to our assumption (H2) we found no evidence for a significant main effect of the lower price difference condition ($F(1,125) = 1.06$, $p = .31$).

However, we found an interaction of motive and price ($F(1,125) = 6.83$, $p = .01$, $\eta^2 = .06$). More specific, the slow fashion intention was most pronounced under the condition of egoistic motive activation combined with the 20% price condition ($M = 2.61$, $SD = .68$; see Fig. 6).

¹ This experiment was part of a Bachelor Thesis written by Sophie Fiebig at the Martin-Luther-University Halle-Wittenberg

Bonferroni-corrected pairwise comparisons revealed that the egoistic 20% price condition increased the intention significantly but only compared to the biospheric condition under the 20% price difference ($p = .05$), not compared to either of the two 60%- conditions (each $p > .62$). H3 was partly verified. Controlling for gender, no significant impact was observed.

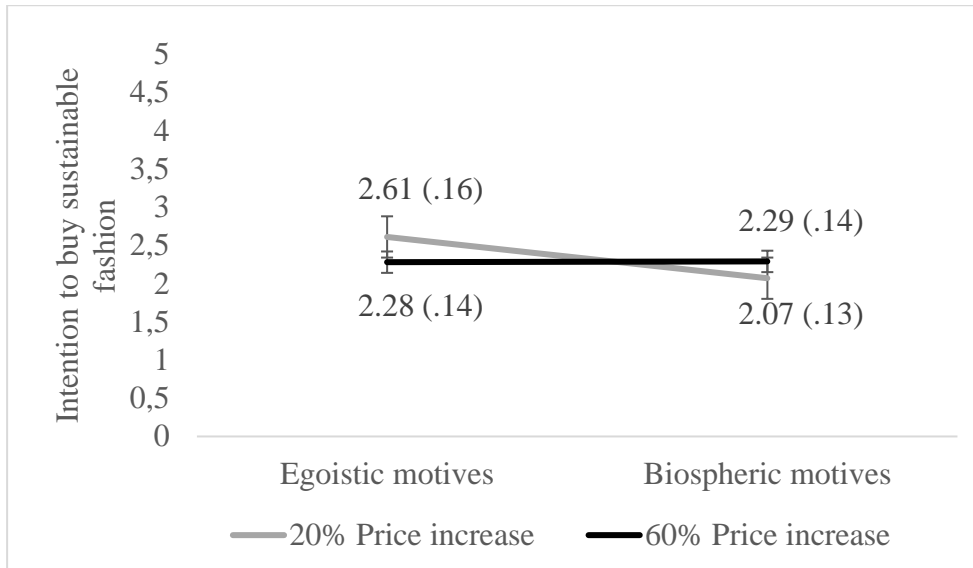


Figure 6. Means and Standard Deviations for the intention to buy sustainable fashion in dependence of motive and price in experiment 2. The highest average intention is reached under egoistic motives and the 20% price difference.

Planned purchases

In contrast to our assumption (H1), the activation of egoistic respective biospheric motives did not result in different frequencies of planned purchases ($\chi^2(1, N = 45) = 0.56, p = .46$): 25 bags were chosen under egoistic and 20 bags under biospheric activation (with 22.5 sales expected). However, we did find the expected main effect of price (H2; $\chi^2(1, N = 45) = 6.42, p = .01$): Participants chose 31 sustainable bags in the lower compared to 14 bags in the higher price condition with an expected 22.5 bags. The influence of the 20% price difference was mirrored in the group comparisons. Egoistic motive activation increased planned purchases if accompanied by the 20% difference in contrast to the 60% difference, independent of the motivation (i. e. $\chi^2(1, N = 25) = 4.84, p = .03$). There was no difference to the biospheric condition under the 20% difference ($\chi^2(1, N = 31) = 0.81, p = .37$). H3 was partially verified.

Behavior - sales of sustainable bags

Purchase of sustainable bags: In accord with the planned purchases – but in contrast to expectation (H1) – the impact of the motive activation did not lead to different numbers in sustainable bag sales ($\chi^2(1, N = 42) = 1.52, p = .22$). Even more, neither the main effect for the lower price difference (H2; $\chi^2(1, N = 42) = 0.10, p = .86$) nor the interaction between motive and price (e.g., $\chi^2(1, N = 25) = 1.00, p = .32$) were observed for the factual purchase behavior. In sum, concerning sales volume of sustainable bags none of our assumptions was verified.

Comparing sustainable and conventional sales in relation: Under the egoistic motive condition 25 sustainable compared to 12 conventional bags were sold with an amount of 18.5 expected sales – a significant difference ($\chi^2(1, N = 37) = 4.57, p = .03$). Even more, we found an effect of the price (H2; $\chi^2(1, N = 29) = 4.17, p = .04$). Under the lower price difference condition 20 sustainable and 9 conventional bags were sold, while 14.5 were expected. We explored an interaction of motive (egoistic/biospheric), price (20%/60% difference) and type of bag (sustainable/conventional) in a 2 x 2 x 2 contingency table but there was no significant interaction: $\chi^2(1, N = 66) = 1.28, p = .26$.

2.3.3 Discussion

In accord with earlier studies (Griskevicius et al., 2010, Kibbe et al., 2014, Mueller et al., 2011, Puska et al., 2018; Yadav, 2016) Experiment 2 provided evidence for the stronger power of egoistic motive activation to promote sustainable consumer choices compared to biospheric motive activation: The emphasis on egoistic motives increased the slow fashion intention independent to a higher amount compared to the biospheric priming. Even more, the sustainable fashion accessories were more frequently bought compared to conventional ones. Interestingly, we could neither observe this effect for the planned purchases nor when only analyzing the percentage of sold sustainable bags. Thus, the motive activation seemed to have reduced shopping conventional items but had an equal impact on the sustainable buying decision.

Furthermore, we found the expected effect of a smaller price difference: Under the 20% price-condition, actual sustainable sales as well as planned purchases outnumbered conventional. This finding is in line with the reported willingness of consumers to pay a premium of around 20% for sustainable items (Hiscox & Smyth, 2006; Ellis et al., 2012). However, we did not find this interaction of motive and prices at the behavioral level. It seems, the activated personal benefit did not make the higher price difference overly attractive in case of sustainable gym bags.

In contrast to Experiment 1, the intervention impact seemed to be transferred to a more general level as we observed an interaction of price and motivation for the boarder slow fashion intention: A moderate 20 % – in contrast to the 60 % – price difference for sustainable bags in comparison to conventional and the focus drawn on egoistic motives, resulted in the highest average intention to use slow fashion.

2.4 General Discussion

In both experiments, the prices for sustainable textiles were increased by 0%, 20%, 60% or 100%. We found that the participants were willing to buy sustainable textiles under the 20% and 100% price-difference if personal benefits of sustainable clothing were pronounced. In that cases the signaling of status was visible in our experiments. In case of the 20% price difference our results match with other authors like Griskevicius et al. (2010) but concerning the 100% price difference, we could show that the costly signaling approach endures even higher increases for sustainable items if personal benefits are suggested. This experiment is the first to test such extended price ranges. However, our studies reveal that more is not more, because the costly signaling effect was mainly limited to hypothetical choices. This is rational because it is easier to decide for a costly item in a hypothetical choice. Another reason for the lacking significant interaction of motive and price in the choice behavior may be that we measured the intention at a more general level than the choice behavior. Indeed, the only factor which influenced the purchase of sustainable bags relative to conventional bags in experiment 2 was the low price for the sustainable fashion bags and egoistic motive activation. This was probably due to the fact that the intention was rated next after the purchase of the item. In contrast to the interaction, the influence of egoistic motive activation and small prices was visible in the intention and behavior of the second experiment. The crucial role of the price is pronounced by other studies too (Iwanow, McEachern & Jeffrey, 2005, Connell, 2010, Eckhardt, Belk & Devinney, 2010, Moser, 2015). We agree with those authors that the price is one of the most important factors for the purchase of clothing. In line with other authors (Kibbe et al., 2014, Lundblad & Davies, 2016, Yadav, 2016 and Puska et al. 2018) we could also show that personal benefits matter more than environmental benefits for the purchase of sustainable items. The motivation seemed to be important for egoistic and altruists, as De Dominicis et al. (2017) acknowledged. Egoistic motivation did not influence the choice for sustainable textiles itself but it increased it relative to conventional items as is also shown by Griskevicius (2010). It is therefore not enough to test

the amount of sustainable clothing only. Adjusted prices and the pronunciation of personal benefits support the purchase of sustainable fashion. Nevertheless, until now, personal benefits are hardly pronounced in marketing campaigns for sustainable clothing. It is therefore important to highlight the benefits of sustainable choices for health and personal well-being. The right price is more of a challenge. Obviously, it is not the high price per se which inhibits the purchase of sustainable clothing but a question of the relative price difference compared to conventional clothing. As long as fast fashion retailers continue to sell a t-shirt at the cost of a sandwich, it will be difficult to leave its niche for sustainable clothing.

2.4.1 Limitations

This studies' explanatory power may be constrained as t-shirts (study 1) were compared to cotton bags (study 2) which are products of different functions. While the different results for the motive interventions speak in favor of this criticism, this is contradicted by the results for the intention. The results for the purchase intention display a similar pattern across both studies. Also, our sample consist of students, which means that we cannot generalize our results on other groups, although people with higher education are currently the main target groups for the sustainable market (Laroche et al., 2003; Verhoef & van Doorn, 2016). It is however thinkable that these results differ for older participants, because some personal benefits like a good health may be more valuable for older than younger people.

2.4.2 Conclusion and implications for practitioners

In sum, our results match with findings concluding that personal benefits of sustainable behavior may enhance egoists and altruists to behave pro environmentally (Grolleau, et al., 2009, Muller et al., 2011, De Dominicis et al., 2017). We consider the emphasis of environmental benefits important if the target audience has an ecologic value orientation (Grolleau et al., 2009) or if the product has no specific personal benefits compared to a similar conventional product. Referring to our results and related findings we want to encourage practitioners to pronounce personal benefits of pro-environmental behavior and sustainable consumption. Additionally, researchers need to further examine certain benefits or alleviations for health linked to sustainable products to provide a clearer link to the positive outcome.

A biospheric motivation can be addressed if the personal benefits are small, unclear or unknown and do not justify increased prices above a 20% premium. Price fairness is an individual issue (Xia, Monroe & Cox, 2004). Further research should therefore investigate motive and price combinations to assess at which stage prices for sustainable products are perceived unfair

Study 2

The influence of social validation and motivation on sustainable fashion consumption

3. Study 2 - The influence of social validation and motivation on sustainable fashion consumption

Abstract

Clothing swap events, where used clothing is exchanged, can add to the deceleration of the fast fashion cycle, because the life span of clothing is extended. When looking for clothing, younger consumers are influenced by their peers and hedonic motivation, which raises the question whether messages linking motivation with the influence of peers can successfully promote the use of second-hand clothing. We expected to positively influence intentions to obtain second-hand clothing if self-focused benefits of clothing swap events are highlighted by close peers, because close peers are found to exert influence on clothing decisions and self-focused motives are often found to affect clothing consumption. The findings for mixed self-focused (egoistic) and environmental (biospheric) messages are inconsistent.

We therefore tested the activation of mixed (Experiment 1) and separated (Experiment 2) egoistic and biospheric motives to visit a clothing swap event, transmitted by a friend/friends or clothing swap organizers. Experiment 1 ($N = 138$) showed that a friend can strengthen the intention to visit a clothing swap event independent of the motivation while Experiment 2 ($N = 164$) added, that the positive influence of close peers on the intention to visit a swap disappears if they lose their credibility. Furthermore, we found biospheric and implicitly, egoistic motivation to promote the visit of a swap event by an environment-focused message, in comparison to the egoistic motivation only. The results are important to understand the borders of social validation when combined with motivational approaches for the consumption of sustainable clothing.

3.1 Introduction

Using second-hand clothing contributes to the reduction of the global negative consequences of conventional clothing production (Yildiz, Herrmann-Linß, Friedrich & Baumgarth, 2015; Nyambura, 2018). Especially clothing swap events help to rebuild the eventually rather negative connotation of used clothing (Matthews & Hodges, 2016). Practical experiences show that swap events seem to attract younger target groups. These target groups pursue hedonic and normative goals, when looking for clothing (Lindenberg & Steg, 2007). Their clothing should be fashionable and valued by their peers (Hiller Connell, 2009; Jayasankaraprasad &

Kathyayani, 2014), because it is the peers who transmit consumption norms and as socialization agents have a stronger influence on the purchase, especially the amount and price of clothing compared to parents (Kurt, Inman & Argo, 2010).

Hedonic goals stronger refer to self-interest, for example, swap events can attract people looking for new shopping experiences. Normative goals on the other hand stronger refer to social validation seeking (Jen-Hung & Yi-Chun, 2010). When compatible, these goals can influence people to behave in a more sustainable way depending on their motivation (Lindenberg & Steg, 2007; ²Steg, Bolderdijk & Keizer, 2014). Besides egoistic motivation, biospheric and altruistic motivation can influence sustainable consumption in a positive way (Magnusson, Arvola, Hursti, Åberg & Sjöden, 2003; De Groot & Steg, 2009; Puska, Kurki, Lähdesmäki, Siltaoja & Luomala, 2018). While biospheric motives seem to provide a more stable base for pro-environmental behavior (Zelenski, Dopko & Capaldi, 2015; Klein & Hilbig, 2018), egoistic motives are found to stimulate sustainable consumption if linked to personal benefits like increases in status (Griskevicius, Tybur, & Van den Bergh, 2010). However, so far it remains an open question how the influence of different socialization agents might interact with different motivations. To close this gap we conducted two experiments, analyzing the influence of different socialization agents combined with mixed egoistic and biospheric motives (Experiment 1) and distinct motives (Experiment 2) on the intention and behavior to visit a clothing swap event.

3.1.1 The influence of socialization agents on sustainable behavior

Recommendations from experts and close peers can stimulate pro-social behavior (Durantini, Albarracin, Mitchell, Earl & Gillette, 2006), pro-environmental behavior (Afsar, Badir & Kiani, 2016) or purchase behavior (Mangleburg et al., 2004). To influence others' behavior a socialization agent needs to appear credible and trustworthy (Gaied & Rached, 2010). Elaborated argumentation can enhance credibility – if the recipient is strongly enough involved to scrutinize the information given. However, in case of sustainable clothing, generally we find low involvement concerning the negative consequences of conventionally produced fashion (Hiller Connell, 2009; Connell, 2010). Accordingly, attributes of the communicator him- or herself gain importance as peripheral information (Petty & Cacioppo, 1986; Goldstein, Cialdini & Griskevicius, 2008; Robertson & Barling, 2015). Further, especially in case of low involvement, what significant others say and do exerts stronger social influence, e. g. by activating descriptive and injunctive norms (Nolan et al., 2008; Kang, Liu & Kim, 2013).

Besides, when descriptive and injunctive norms are in accord, they appear to more likely influence pro-environmental behavior compared to descriptive norms alone (Handgraaf, de Jeude & Appelt, 2013). Consequently, due to the above considerations when relevant peers recommend a certain behavior their impact should be stronger compared to recommendations from others (Hypothesis 1).

3.1.2 The influence of motives on sustainable behavior

When asked for the shopping motivations younger people report hedonic goals prevalently, for example the thrill of the chase for bargains (Jen-Hung, & Yi-Chun, 2010). Self-interest is mainly negatively correlated with pro-environmental behavior (Vohs, Mead & Goode, 2008; Steg et al., 2011) but can have a positive influence if the appreciation of nature is connected to personal benefits (Griskevicius et al., 2010; Miao & Wei Wei, 2013; Kibbe, Bogner & Kaiser, 2014). The positive influence of biospheric motives on pro environmental behavior is evident (e.g. Groot & Steg, 2009; Zelenski, Dopko & Capaldi, 2015; Klein & Hilbig, 2018). However, the empirical findings on the impact of mixed motive activations on pro-environmental behavior are inconsistent (Mueller et al., 2011; Miao & Wei, 2013; Yadav, 2016; Birch, Memery & Kanakarathne, 2018). While some authors report combined self- and other-focused appeals activating egoistic and biospheric motivation to increase the intention to behave pro-environmentally compared to single appeals (Magnusson et al., 2003; Kareklas, Carlson & Muehling, 2014), others find single messages to outreach mixed ones (Grolleau, Ibanez & Mzoughi, 2009; van den Broek, Bolderdijk & Steg, 2017). Following the matching hypotheses, in the case of hedonically oriented younger persons activated egoistic and biospheric motivation should have a stronger power to promote pro-environmental behavior compared to no activation (Hypothesis 2). This impact should be strongest when the pro-environmental behavior is promoted by relevant peers (Hypothesis 3).

3.2 The present research

The present research aims to gain a better understanding how to promote sustainable behavior in younger target groups. Due to the severe consequences of the fast fashion consumption we focused the use of second-hand clothing as our target, more specific the visit of a clothing swap event. For reasons of validity we conducted a field experiment. As dependent variables served the intention and actual visit of two open access swap events in the largest city of North Germany, Hamburg. To analyse the assumed peer impact we constructed two messages,

including the recommendation to visit a specific swap event either given from the event organizers or a personalized (Experiment 1) or unspecific friend (Experiment 2). To investigate the motive activation impact we presented a message combining egositic and biospheric activations in comparison to a control group (Experiment 1), followed by the comparison of distinct motivational messages (Experiment 2).

3.3 Experiment 1

3.3.1 Overview

In the first experiment, we tested the impact of a mixed egoistic and biospheric motive activation in combination with social validation stimulated by a peer's recommendation on the intention to obtain second-hand clothing in the future and visit a clothing swap event. Social validation was given by a specific ("your") friend or the non-specific "organizing team" of the swap event. In line with former findings (e.g. Mangleburg et al., 2014) we expected the friend's recommendation to increase the intention to obtain second-hand clothing and visit a clothing swap event significantly compared to the organizers (H1). Also, according to Kareklas and colleagues (2014) we expected mixed motives to increase the intention to obtain second-hand clothing and visit a clothing swap event in comparison to a control group (H2). Furthermore, we assumed the peer impact and motive activation to interact: In the third hypothesis H3 we expected the combination of a friend's recommendation and motive activation to promote a clothing swap event strongest.

3.3.2 Method

Participants

From a total of 160 participants recruited 138 were included this study. We excluded participants above an age of > 36 and inhabitants of other cities, because the venue of the clothing swap was Hamburg. Ages ranged from 18 to 34 ($M = 23.20$, $SD = 3.39$), 75% were women. The experiment took place in different Universities in Hamburg, with students from social sciences (71%) mainly; 12% economics and others less than 9%.

Questionnaire and procedure

We used a paper pencil questionnaire to obtain the data, which we distributed during classes after a short introduction by the experimenter. Participation rewards were not provided. On the

first page of the questionnaire was a cover story which stated the questionnaire to measure clothing consumption behavior and the attractiveness of swap events. It was followed by an experience report of a friend or organizing team who had visited a swap event. Subsequently, we invited the participants to a swap event on January 2017 in the Ecumenical Forum in Hamburg. Afterwards, participants were asked if they wanted to attend that swap. The following pages captured the sociodemographics, scales included for a manipulation check to check for the norm- and motive activation, intention to obtain second-hand clothing and a measure of behavior difficulty concerning the attendance of swap events. There were also some constructs needed for another study. Scores were computed by calculating mean responses to the items on the scale.

Design and operationalization

We investigated motive activation (motive; mixed motive / control group) and peer impact (sender; a friend / organization team) in a 2x2 between-subject design with gender as covariate. The participants were randomly assigned to one of the four experimental conditions with 33 to 36 subjects each.

Sender: All participants received the first part of the experience report, which originated either from a female friend or the organizing team of the swap event. A female friend was chosen, because women are known to have a stronger fashion involvement compared to men (Zelezny, Chua & Aldrich, 2000; Luchs & Mooradian, 2012) and represent typical clothing swap attendees stronger: *“How a swap works describes the following experience report of a female friend / of the swap’s organizing team”*. Next, each group received a recommendation and detailed description of a swap events:

“I just recently took part in a swap party and it was fun. I can really recommend it to you. It is easy to participate.. You bring a maximum of ten pieces of clothing which are still in a good shape and clean and which you don’t wear any more. These will be hung up on clothing rails. The swap begins. You can collect up to 10 pieces but of course, it is not a problem if you bring less clothing along. It is possible to bring normal clothing and clothing for different occasions. You can also bring or take chic clothing.”

Motive: The experimental group received the following sequence to emphasize environmental and self-focused benefits of a swap: *“If you attend swap events instead of buying new clothes you save our resources and contribute to climate protection. Clothing production is water and energy-intensive and pollutes drinking water in various cases. By participating you can contribute to environmental protection. The event is free. You can save money if you*

take part in a swap instead of buying new clothes again and again. I think that a clothing swap is the best opportunity to obtain beautiful clothing and accessories for free. If you do that instead of entering a crowded mall, it pays off on the long run." The control group did not receive any additional information besides the sender's report.

Overall, we tried to make our messages convincing using an easy language and providing it with facts (Kant, 2012; Gray, 2017).

Intention

We used two measures of intention: 1. The broad intention, which we called "slow fashion intention" was a five-item modified scale leaned on Kim, Lee & Hur (2012). It encompassed the willingness to buy / swap / recommend or defend second-hand clothing (e.g. "I will recommend second-hand clothing 1 = never to 5 = always). The mean over the items was used as an indicator for the slow fashion intention ($\alpha = .81$). 2. The intention to visit the upcoming event on January 2017 was assessed by a binary statement ("will you come to the swap event?" (yes/no)).

Manipulation Check

Motive activation: We used four items from the revised NEP Scale (Dunlap, Van Liere, Mertig & Jones, 2000) to measure the salience of environmental values (1 = strongly disagree to 5 = strongly agree). Contrary to Dunlap et al. (2000) we did not find internal consistency of the scales in our sample. Consequently, we had to use single items as dependent variables. For that reason we used "Humans have the right to modify the natural environment to suit their needs" as dependent variable to measure egoistic and "Plants and animals have as much right as humans to exist" to measure biospheric motivation.

Sender: To check if the peer message lead to a stonger social influence compared to the less relevant sender we assessed the activation of norms. Descriptive norms were measured using two items ($\alpha = .82$; e. g. "People that are close to me, buy second-hand clothing" 1= never to 5 = always). The injunctive norm scale had five items ($\alpha = .91$; e.g. "How much would your friends appreciate it, if you wear second-hand clothing"? 1= not at all to 5 = very much). For each norm construct, the mean over the items served as indicator.

Behavior difficulty: This scale was included for exploratory purposes, to explore whether the social validation could influence the perceived difficulty to obtain second-hand

clothing. It assessed how difficult participants felt to obtain second-hand clothing (e.g. “I find it [1 = not at all difficult to 5 = very difficult] to obtain second-hand clothing”).

3.3.3 Results

Analytical process

We used a three-way ANCOVA with gender as covariate to investigate our assumptions for our metric data. The assumptions of normal distribution and homogeneous variances were not met as the intention’s distribution was right-skewed, because of the sample’s low intention. However, because the group sizes were comparable, and we had >10 participants, the ANCOVA should still be robust (Glass, Beckham & Sanders, 1972). For our categorical data considering the dependent variable to participate in the swap, we conducted group comparisons by the chi square test for goodness of fit.

Manipulation Check

We checked the motive manipulation first. The mixed motive message showed a significant main effect on the salience of egositic motives ($F(1, 137) = 4.31, p = .04, \eta^2 = .03$), but not on the biospheric ($F(1, 137) = 1.67, p = .07$). More precisely, the experimental group scored significantly higher compared to the control group on the statement “Humans have the right to modify the natural environment to suit their needs” but did not differ on the item “Plants and animals have as much right as humans to exist”. Although the mean egoistic motive salience was moderate under both conditions ($M = 2.39, SD = 1.05$ vs. $M = 2.04, SD = 0.91$), biospheric motives seemed rather salient independent of the experimental condition ($M = 4.33, SD = 0.71$ vs. $M = 4.59, SD = 0.71$).

Second, the manipulation check revealed the assumed impact of the sender on the descriptive norm ($F(1, 137) = 5.04, p = .03, \eta^2 = .04$) but not on the injunctive norm $F(1, 137) = 1.66, p = .20$). More specific, perceiving the friend’s message resulted in higher descriptive norms ($M = 2.37, SD = 0.79$) compared to the organizer’s ($M = 2.08, SD = 0.73$). The injunctive norm appeared independent of the intervention ($M = 3.50, SD = 0.10$ vs. $M = 3.30, SD = 0.10$).

Third, the difficulty to obtain second-hand clothing was rated as low to moderate ($M = 2.69, SD = 1.02$), independent of the interventions (i.e. $F(1, 137) = 1.65, p = .69$).

Slow Fashion Intention

In accord with expectation (H1), the friend's message increased the slow fashion intention ($M = 1.70$, $SD = .09$) compared to the organizer's ($M = 1.41$, $SD = .08$; $F(1, 137) = 5.44$, $p = .02$, $\eta^2 = .04$). However, opposite to our hypotheses, the motive intervention neither showed a significant main effect ($F(1, 137) = 1.61$, $p = .21$; H2) nor an interaction ($F(1, 137) = 0.76$, $p = .38$; H3). Gender showed no significant impact on the intention ($F(1, 137) = 2.88$, $p = .09$). Figure 7 illustrates the results.

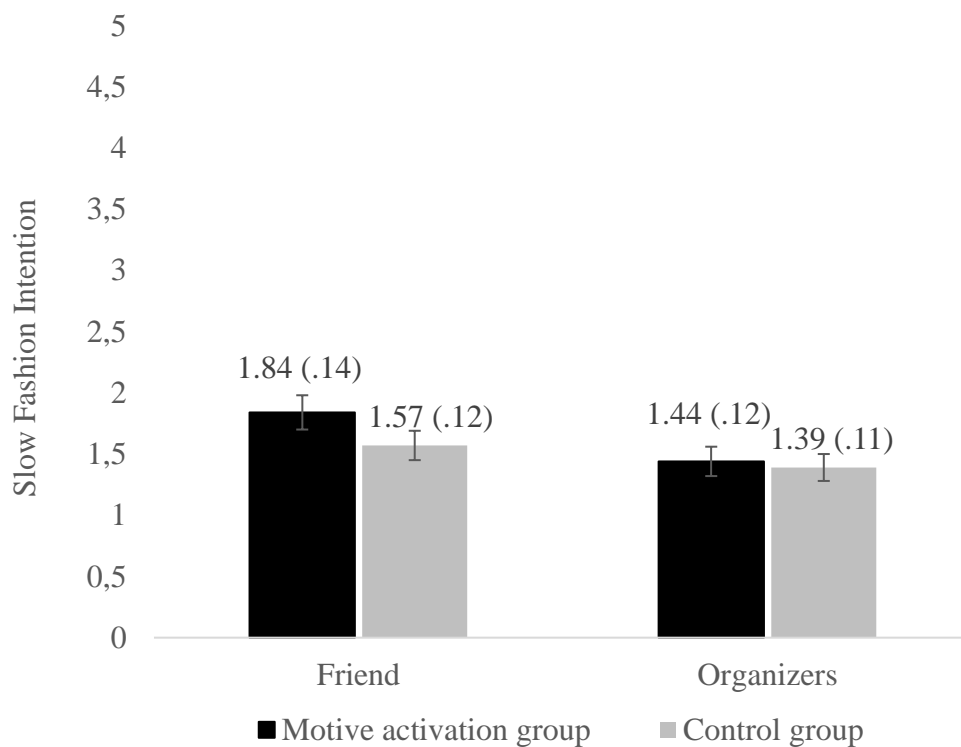


Figure 7. The average slow fashion intention with Means and Standard Deviations in dependence of the sender and motive activation in experiment 1. Main Effect of the sender: The friend increased the slow fashion intention independent of the motive activation.

Intention to visit the upcoming swap event

In order to answer our assumptions for the upcoming clothing swap event, we conducted three chi square tests according to H3, because we compared the motive and friend- condition with the other three conditions: The motive and organizers' condition, the friend and control group condition and the control group and organizers' condition. The chi square test for goodness of fit did not reveal any intervention effect, neither for the sender ($\chi^2(1, N = 48) = 1.33$, $p = .25$),

nor the motive activation ($\chi^2(1, N = 48) = 1.33, p = .25$) or the interaction (i. e. $\chi^2(1, N = 28) = 0.14, p = .71$). A marginally significant result was obtained for the friend and motive condition compared to those controls who got the organizers' recommendation: $\chi^2(1, N = 22) = 2.91, p = .09$. In that case 11% of the $N = 138$ participants wanted to attend the upcoming swap if the friend was accompanied by motive activation and 5% of participants wanted to attend it in the organizers' and control condition.

3.3.4 Discussion

The aim of Experiment 1 was to test whether the influence of mixed motivation and social stimulation affects the intention to obtain second-hand clothing and behavior to visit a clothing swap event. In line with our first assumption, our results reveal that the friend's recommendation significantly stimulated the intention to occupy oneself with second-hand clothing (buy, recommend it) and swap clothing. Though we must add that the effect was small, it is noticeable that the friend's recommendation had an influence, although the sample had a generally low intention for slow fashion behaviors. Our results add further evidence to the literature that similar peer endorsers, even if they are personally unknown to the participant, can stimulate pro-environmental intentions. Close peers provide social validation and, as shown in Experiment 1, affect our intentions by activating descriptive norms (Goldstein, Cialdini & Griscevicius, 2008; Mangleburg et al., 2004; Bapna & Umyarov, 2015). Therefore, it supports the finding that activating social validation promotes sustainable consumption (Poškus, 2016). However, none of our interventions increased the intention for the upcoming swap event. The visit of a swap event is a rather high-cost behavior, because people have to prepare clothing and find the time and the location to participate. This may explain why the motive and norm activation was not successful for that concrete intention but for the less concrete intention to obtain second-hand clothing. Also, in several studies, motive and norm activations are rather successful for lower-cost pro-environmental behaviors (e.g. Cialdini et al., 1990; Zhang et al., 2014). Our expectation of any effect of motive activation or interaction was not met. One possible explanation for the missing effect may be that egoistic motives were activated only, while biospheric motives seemed to be rather salient under both conditions. It seems that activating motivation using self- and environmental-focused messages concurrently does not stimulate or even reduces the effect of the persuasion (Kiviniemi, Snyder, & Omoto, 2002; Feiler, Tost & Grant, 2012). For example, Kiviniemi and colleagues (2002) found that multiple motives for volunteer activities can lead to higher stress and less fulfillment compared to a

single motive. This might reduce the intention. Conflicting motives, unfulfilled needs due to unmet expectations or higher standards for satisfaction are possible explanations for that finding. Another possible reason might be reactance, as mixed appeals could draw the attention to the persuasion attempt that is made (Feiler et al., 2012). We assume reactance as one possible explanation because our persuasion approach jumped right into the swap event and was not embedded in a cover story. Still, reactance can not explain why other studies find a greater behavioral impact of mixed appeals (Kareklas et al., 2014). An alternative explanation for the lacking influence of the mixed motive activation may lie within the specific behavior, as the cost of the behavior to swap clothing might be perceived as too high (Kirchgässner, 1992), because our detailed report about the procedure could have discouraged participants by making the behavior costs of the attendance salient: Collecting and preparing used clothing and searching for the location. Usually most people throw their used clothes away (Greenpeace, 2014). Against this assumption stands the fact that the participants reported a moderate difficulty to obtain second-hand clothing, but this may differ for the specific intention to visit that certain recommended clothing swap. Furthermore, we did not find a significant gender impact ($p = .09$), we had a gender imbalance in our sample with a minority of 35 men. As some studies report females to have higher intentions for pro-environmental behaviors than males (Costa Pinto, Herter, Rossi, & Borges, 2014), the biospheric motive activation might have met a ceiling effect. To overcome these obstacles, in Experiment 2 we used separated appeals to pronounce either self or other focused messages, thus providing single motivations instead of mixed. Furthermore, we reduce our messages to a concise slogan to avoid discouraging participants by a long procedure description. Additionally, we strived for a more balanced number of males and females.

3.4 Experiment 2

3.4.1 Overview

Experiment 2 was intended to overcome the shortcomings of Experiment 1 recruiting a more balanced number of male and female participants and using short and concise slogans for the sender's recommendation. Further, we investigated separated motive activation appeals. For a more sensitive manipulation check for biospheric motives, in Experiment 2 we used a scale tested by Ostertag (2016), which was based on the Schwartz value system (1992). We expected the friend's recommendation to increase the intention to obtain second-hand clothing and behavior to visit a clothing swap event significantly compared to the organizers (H1). Also, we

expected egoistic motives to increase the intention to obtain second-hand clothing and behavior to visit a clothing swap event in comparison to the control group (H2). Last, we assumed the combination of a friend's recommendation and egoistic motives to promote a clothing swap event strongest (H3).

3.4.2 Method

Participants

One hundred and forty-five participants from primary $N = 164$ were left after data cleaning. Gender was nearly equally distributed ($w = 70$), ages ranged from 18 to 35 years ($M = 23.54$, $SD = 3.84$). The participants were recruited at different universities in Hamburg, 73.8% were graduate students from educational science, 26.2% were social science students in their master's degree.

Questionnaire and procedure

A four-sided questionnaire was distributed in different social science and educational sciences classes in different universities in Hamburg. It took the participants about 20 minutes to fill it in. The first page of the questionnaire contained the motive activation. The manipulation check to detect motivation and social validation was displayed on the second and respectively third page as well as the scale for the behavior difficulty to attend a clothing swap event. The last page included a measure for the intention and sociodemographics. Also on the last page, participants were invited to a swap event in December 2017 and asked if they intended to visit it (Yes/No).

Design and operationalization

We conducted a 2x2 design with motives (egoistic / biospheric) and sender (friends / organizers) as between subject factors. Gender was included as covariate. Each of the four conditions was occupied with at least 33 to maximum 39 participants. The slogan to elicit motivation and social validation appeared on each page of the questionnaire. The form of the slogan was leaned on the study of Bolderdijk, Steg, Geller, Lehman and Postmes (2013). By one short and concise sentence egoistic ("Want to do something for yourself?") or biospheric motives ("Want to save the environment?") were activated. Then followed an invitation to the swap ("Come to the clothing swap!") and the friends or organizers' recommendation ("Recommended by friends" /

“Recommended by the swap organizing team”). To allow for more associations and identification, in Experiment 2 the sender was not a single person, instead, „friends“ and the „organizing team“ recommended the clothing swap.

Intention

As in Experiment 1 the slow fashion intention scale was retrieved from Kim and colleagues (2012), adapted on second-hand clothing. It encompassed the purchase of second-hand clothing, visit of clothing swap events, usage of clothing swap websites and exchange of clothing with relatives and friends (1 = never to 5 = always, $\alpha = .73$). Also, we measured the intention to attend the upcoming event by the dichotomous item (“will you come to the swap event?” (yes/no)).

Manipulation Check

We used items from Ostertag (2016) for the manipulation check (e.g. “Please evaluate to what extent your actions are guided by the following principles” – “cooperativeness” - 1 = is contrary to my principles to 5 = very important). Schwartz’ (1992) four value types “power”, “achievement” (self-enhancement) “universalism” and “benevolence” (self-transcendence) were found in a factor analysis, that we conducted previously, but the reliabilities were low (Cronbach’s Alpha = from .25 to .66). Therefore we had to use the single items as dependent variables to detect egoistic or biospheric motive activation. We used the item “Saving the environment” as indicator for a salient biospheric motivation and “Enjoying life” for a salient egoistic motivation.

The scales for the descriptive norms and behavior difficulty resembled those in Experiment 1. Only injunctive norms were measured by 1 item contrary to Experiment 1 (e.g. “Most people that are close to me find it [1 = not good at all to 5 = very good] when I wear second-hand clothing”). The reliabilities for the descriptive norm scale and behavior difficulty scale were good ($\alpha = .83$).

3.4.3 Results

Analytical process

The impact on the slow fashion intention was evaluated by a three-way ANCOVA using motive and sender as independent variables. Gender was included as covariate. Again, the dicotomous

intention to take part in the swap event was planned to be analysed using the chi square test for goodness of fit . However, only 6 participants stated “yes” for the upcoming even. For this reason, we decided to use the intention to visit a swap event within one year, until next fall, as measure for the intention to visit a swap event – an item included in the slow fashion intention.

Manipulation Check

Contrary to intuition participants receiving the environment-focused slogan “Want to save the environment”? scored significantly on the motivation “to enjoy one’s life” compared to those receiving the self-focused slogan “Want to do something for yourself” $F(1, 144) = 4.54, p = .04, \eta^2 = .03$). The slogans did not differ concerning the motivation “to save the environment” $F(1, 144) = 0.78, p = .38$). It seems biospheric motivation was salient ($M = 3.37, SD = 0.10$ vs. $M = 3.50, SD = 0.10$) and bound to the motivation “to enjoy one’s life” ($M = 4.61, SD = 0.06$) more than to the motivation “to save the environment” ($M = 4.43, SD = 0.60$).

The mean salience of injunctive norms was moderate independent of the intervention ($M = 3.10, SD = 0.80$ vs. $M = 3.10, SD = 0.80$) while the salience for descriptive norms was low ($M = 1.84, SD = 0.80$ vs. $M = 2.10, SD = 0.80$). The intervention had no influence on injunctive $F(1, 144) = .00, p = .95$ or descriptive norms $F(1, 144) = 2.52, p = .11$.

The difficulty of behavior to obtain second-hand clothing was rated as moderate ($M = 2.23, SD = 1.05$). It was not influenced by the sender or motive activation separately (i.e. $F(1, 144) = 2.32, p = .13$) but it was significantly influenced by the interaction of sender and motive ($F(1, 144) = 5.33, p = .02, \eta^2 = .04$). The lowest cost was reported if the event was recommended by the organizers emphasizing egoistic benefits of the event ($M = .20, SD = .17$), the highest costs under the friends and egoistic condition ($M = 2.67, SD = .18$).

Testing the assumptions H1 to H3 for the slow fashion intention

Against expectation, we found no evidence for a main effect of the sender (H1): $F(1, 144) = 0.34, p = .56$. The broad intention was equally low under the friends’ ($M = 1.60, SD = .01$) and organizers’ condition ($M = 1.65, SD = .01$). Concerning the assumption of a main effect of the motivation (H2), we found a significant increase in the intention: $F(1, 144) = 25.03, p = .01, \eta^2 = .06$. However, against expectation the main effect was due to the biospheric slogan ($M = 1.76, SD = .07$), which, according to the manipulation check, activated biospheric and egoistic motivation, compared to the egoistic slogan ($M = 1.49, SD = .07$). H2 was not verified. Contrary to our assumption H3, when motives and senders were mixed there was no significant increase in the intention: $F(1, 144) = 0.37, p = .55$. The average intention varied from $M = 1.43$ to $M =$

1.76. A main effect gender was also observed: $F(1, 144) = 25.03, p < .00, \eta^2 = .15$, in which women reported a higher engagement for slow fashion behaviors ($M = 1.86, SD = .07$) than men ($M = 1.39, SD = .07$). No interaction with gender and the independent variables was observed. Figure 8 illustrates the results.

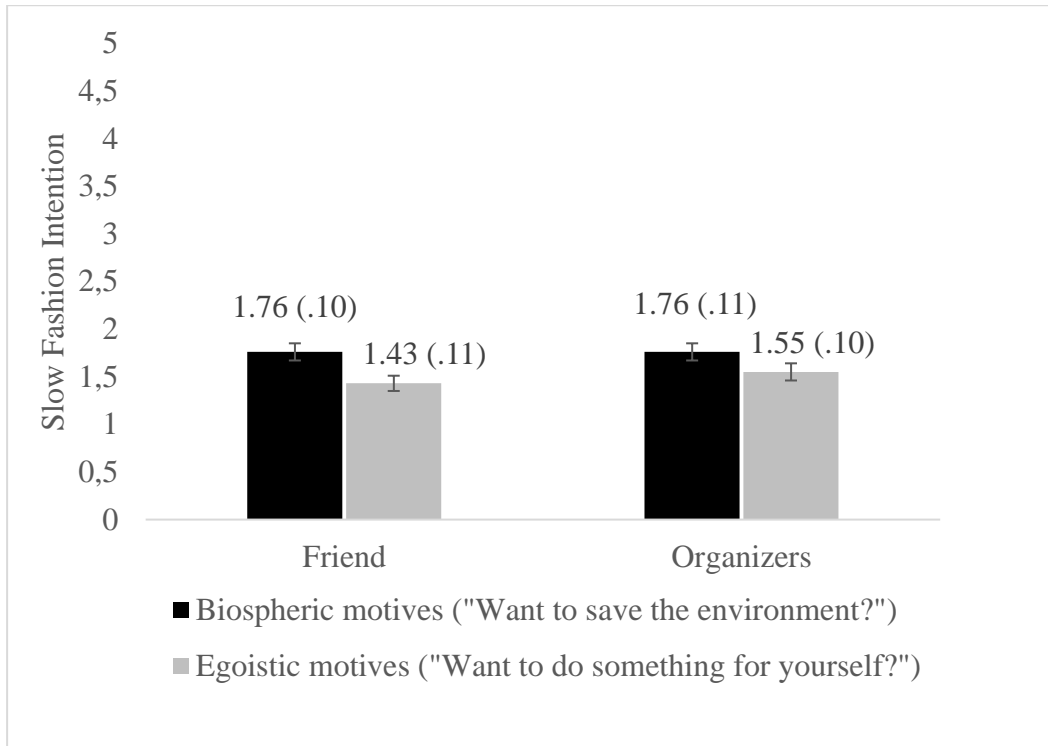


Figure 8. The average slow fashion intention in dependence of sender and motive in experiment 2. Biospheric (and egoistic) motives increase the intention by the environment-focused slogan compared to the egoistic motive by the self-focused slogan.

Testing the assumptions H1 to H3 for the intention to visit a clothing swap

The results for the intention to attend a swap until next fall mainly resembled the slow fashion intentions' results. Women reported an increased willingness to visit a swap event until next fall ($M = 1.33, SD = .06$) compared to men ($M = 1.13, SD = .06$), which was significant $F(1, 144) = 5.18, p = .02, \eta^2 = .04$. Those participants receiving the "Want to save the environment" slogan reported an increased intention to visit a swap ($M = 1.32, SD = .06$) compared to those with the slogan "Want to do something for yourself?" ($M = 1.13, SD = .06$) with significant difference $F(1, 144) = 4.76, p = .03, \eta^2 = .03$. Contrary to our assumption H1, the sender impact did not reach significance ($F(1, 144) = 1.28, p = .26$). The interaction of sender x motive was only marginally significant $F(1, 144) = 2.29, p = .06$, so we rejected H3.

3.4.4 Discussion

The aim of Experiment 2 was to test whether the influence of separated motives and social stimulation affects the intention to obtain second-hand clothing and the intention to visit a clothing swap event. We observed a main effect of motivation on the intention to obtain second-hand clothing and visit a swap event but contrary to our assumption biospheric and egoistic motives strengthened these intentions. Also, contrary to our expectation, it was the environmental slogan, that addressed egoistic besides biospheric motivation. A possible explanation for this finding is, that the variable, which we used to check for an egoistic manipulation, the enjoyment of life, could describe a more complex life concept, which includes personal and environmental integrity. Perhaps our manipulation check was not valid to detect the biospheric motivation. Our results concerning the influence of the biospheric motivation are in line with Bolderdijk et al. (2013), who had used a slogan which was similar to our's. The authors explain the success of their biospheric slogan in contrast to an economically-focused slogan, because people want to maintain a positive instead of a "greedy" self-concept. Additionally, it matches our finding of personal and environmental integrity, because the authors report that priming with self-relevant instead of neutral words pronounced the affective preference for the biospheric appeal in their study. This speaks in favor of the Inclusion Model for Environmental Concern, which suggests that altruism may be inclusive of self-interest (De Dominicis et al., 2017) and is another hint that environmental protection may be linked to self-focused motivation (De Groot & Steg, 2009; Mueller et al., 2011; Kibbe et al., 2014). The assumptions for the sender and interaction were not verified. We assume that the sender did not influence the intention to obtain second-hand clothing and visit of a clothing swap, because he might have appeared less credible compared to the sender in Experiment 1, resulting from the missing experience report to avoid to make the preparation before a swap salient. Contrary to expectation the difficulty of behavior was even increased and highest under the friends' compared to the organizers' condition. Eventually, the organizers were seen as more experienced than the friends, because without experience report, there is no proof that those friends have been to a swap event before. For this reason norms were not activated and could not interact with motivation. The importance of the sender's credibility is addressed by different studies (Gaied & Rached, 2010; Robertson & Barling, 2013). The additional personal information in Experiment 1 seems therefore as a valuable addition that helped to maintain the senders' credibility. Concerning gender, it is frequently reported (Luchs & Mooradian, 2012,

Costa Pinto et al., 2014) that women have a higher intention to obtain second-hand clothing and visit a clothing swap. This was also observed in our experiment.

3.5 Summary and General Discussion

The chief objective of the present experiments was to test whether the interaction of egoistic and biospheric motives with different socialization agents increases the intention to obtain second-hand clothing and visit a swap event in a hedonically motivated target group. Based on previous research showing that close peers are one of the most important sources of information for younger people when making purchases (Keresztes et al., 2008; Lee, 2010, Bapna & Umyarov, 2015) and that mixed and distinct motives may promote sustainable behavior under certain circumstances (e. g. Kareklas et al., 2014; Puska et al., 2018), we devised a design that highlighted mixed (Experiment 1) or distinct (Experiment 2) egoistic and biospheric messages, pronounced by different senders. Experiment 1 showed that close peers like a friend can influence the intention to obtain second-hand clothing and visit a swap event compared to distant peers like swap organizers by activating descriptive norms. The positive influence of descriptive norms on pro-environmental behavior is an established finding in social psychology (Nolan et al., 2008; Goldstein et al., 2008; Robertson & Barling, 2013; Demarque et al., 2015) and stronger in case of low involvement in a topic (Petty & Cacioppo, 1986). Peer influencers must appear credible and trustworthy to influence behavior, which was eventually not given in Experiment 2, mirrored in insignificant results for normactivation and a significant increase in behavior difficulty compared to Experiment 1. Our result concerning the use of mixed appeals highlight, that some environmental appeals can stimulate pro-environmental intentions by activating biospheric but also egoistic motivation (Schultz, 2002; Asensio & Delmas, 2015). This speaks for Schultz (2002) assumption that the path to sustainability is through inclusion – self-interest as a part of altruism. On the other hand, referring to biospheric and egoistic messages explicitly may appear conspicuous, because if the Inclusion Model for Environmental Concern is correct, mixing both messages it is a repetition, which draws the attention on the persuasion attempt and may lead to reactance (Feiler et al., 2012). It is questionable, whether the persuasion attempt is also suspicious when descriptive norms and motives are addressed at the same time but the lacking interaction of norms and motives in both experiments could point in this direction.

Finally, this leaves us with the conclusion that activating both, egoistic and biospheric motivation or even motivation together with social validation in a message, could provoke reactance but activated separately, they can have positive influence on pro-environmental

intentions. Also, biospheric and egoistic motives indeed influence pro-environmental intentions but it should be kept in mind that some messages already address both- biospheric and egoistic motivation, so that it appears unnecessary and may be conspicuous to emphasize both motivations explicitly, since it seems that these motivations are varying in importance for people (Grolleau et al., 2009).

3.5.1 Limitations and future directions

The most obvious limitation is that due to limited resources, we could not test whether the participants, that wanted to visit the clothing swap, really visited it. Second, considering our sample, we used adolescents ranging from 18-35-year-olds in both studies and therefore can't make comparisons to other milieus, although it can be expected that the results differ for older participants with higher incomes (Moser & Kleinhüchelkotten, 2017), because older participants seem to be less prone to peer influences (Steinberg & Monahan, 2007). Recent studies display fluctuating influence of peers along life span as parental influence appears to be stronger for pre-adolescents (12 – 16-year-old) and weaker for adolescents (Scalici & Schulz, 2014). Additionally, the effect on pro-environmental intentions can differ in dependence of the endorser and should be tested with different endorsers, because they may differ in credibility, similarity and Expertise (Wei & Lu, 2013; Robertson & Bartling, 2013).

General Summary and Conclusion

4. General Summary and Conclusion- Studies 1 and 2

4.1 Summary and Discussion

The present research has yielded a number of important findings: The influence of egoistic and biospheric motivation on pro-environmental intention and behavior differs depending on whether purchase behavior or non-commercial behavior is tested. Study 1 showed that the emphasis on personal benefits can positively influence the amount of sold sustainable compared to conventional bags. Although egoistic motivation in Experiment 2 of Study 1 did not affect the amount of sold sustainable bags per se, it reduced the purchase of conventional bags. Additionally, egoistic motivation affected sustainable choice behavior if accompanied by a slightly higher price for sustainable clothing. This was the common result of both experiments in Study 1 and gives credit to Griskevicius and colleagues (2010), Sundie and colleagues (2011) and Puska and colleagues (2018), who found that sustainable products are preferred compared to conventional products if the purchase is linked to personal benefits, for example increases in status. Experiment 2 adds some important finding those previous studies and shows that egoistic motivation can increase the choice of sustainable t-shirts even under the condition of a double price for sustainable compared to conventional fashion. This form of conspicuous consumption could signal the consumers' status, because the consumer is willing to pay higher prices for everyone's good, as stated in the costly signalling theory (Zahavi, 1975).

Some campaigns already use self-interests of customers to stimulate sustainable forms of behavior. The Greenpeace Detox Campaign for example links clothing production to consumer's health. It put pressure on at least 79 companies that confirmed to sign the Agreement to avoid toxic chemicals in clothing (Greenpeace, 2018). However, it is important to add that our finding was limited to consumption behavior. Another important finding of Study 1 was that the price had a main effect on choice behavior and real choices of sustainable compared to conventional textiles, so that a lower price for sustainable textiles was clearly preferred. Sustainable textiles are often reported as too expensive compared to conventional textiles (Connell, 2010). This is a challenging finding, because it is hardly possible to produce sustainable clothing at the low cost of the conventional fashion sector unless everybody is content with basic outerwear. However, as could be seen in Study 1, price increases could probably be outweighed if individual benefits are linked to the products.

Study 2 broadens the evidence for motive-activation adding social influence to the intervention: A friend increased the intention to obtain second-hand clothing significantly compared to the swap organizers in Experiment 1. However, the influence of descriptive norm activation was not strong enough to stimulate the intention to visit the specific clothing swap event. The positive influence of close peer endorsers on sustainable behavior is reported in Goldstein and colleagues (2008) Fornara and colleagues (2011) and Grønhøj and Thøgersen (2012). However, this positive effect is mostly found for lower-cost behaviors, for example waste recycling and energy saving (Diekmann & Preisendörfer, 2003). Also, it seems to work for hypothetical choices or intentions (Matook et al., 2015; Demarque et al., 2015). It is thinkable that peer influences might have weaker effects for higher-cost behaviors, which include preparation time. This may be the reason why descriptive norms affected the intention to use second-hand clothing but not the willingness to visit the specific swap vent in Study 2.

Concerning the influence of motive activation on sustainable intention and behavior the results differed for the non-commercial behaviors to obtain second-hand clothing and visit a clothing swap event. It was the environment-focused slogan in Experiment 2, Study 2, which activated biospheric and egoistic motivation and increased the intention to visit a clothing swap event in the future and obtain second-hand clothing. This finding showed that biospheric values may indeed provide the most stable base for pro-environmental behavior (De Groot & Steg, 2009; Klein & Hilbig, 2018) but can also address people with self-interests if nature appreciation is linked to personal benefits (Schultz, 2002; Kibbe et al., 2014). On the other hand, Study 2 showed that messages pronouncing both motivations explicitly are often not effective, because they seem conspicuous, could trigger reactance and inhibit people with either stronger biospheric or egoistic values (Grolleau et al., 2009; Steiner et al., 2017). This finding is contrasted by studies that found a positive effect of both motives on pro-environmental behavior (Asensio & Delmas, 2015). Furthermore, our results are the first to show that messages mixing motive- and peer influence may face similar problems as convincing attempts using mixed motives. These interventions promoted sustainable behavior in separated experiments in Study 2 but did not affect pro-environmental behavior when used simultaneously. Our results show that a mid-way could be reasonable, which means to pronounce either egoistic or biospheric motivation depending on the commercial or non-commercial behavior and depending on whether the sustainable product or activity provides personal benefits. Also, it may be reasonable to separate peer influence- and motive interventions to avoid those messages appear unidirectional and conspicuous.

4.2 Conclusion

Consequently, our results point out that self-interests may be better motivators in situations where benefits for the self are more obvious or can be obtained in the first place - in consumption decisions, especially if higher prices for sustainable products are used, because they suggest higher quality (Verma & Gupta, 2004) and can signal status of the consumer (Sundie et al., 2011, Puska et al., 2018). On the other hand, pronouncing environmental benefits could be the better choice if personal benefits are perceived to be lower than environmental benefits, which we assume to be true for the exchange of used clothing and other behaviors, for example energy saving (Leygue et al., 2017). Sustainable textiles should be affordable for the population. If sustainable textiles are more expensive than conventional textiles it is recommended to foreground the benefits for the person linked to the increase in price.

Due to the results, this work does not recommend using motives in combination with peer influence, because more research is needed to validate the marginally significant result ($p = .09$) in Experiment 1 of Study 2. The usage of a similar peer endorser independent of motive activation was successful in one of the two studies that tested different persuaders. Other studies confirm, that close peers are meaningful sources of information for pro-social behavior (Barry & Wentzel, 2006) but peer endorsers need to be credible, for example by sharing their experiences (Scalici & Schulz, 2014; Matook et al., 2015).

Finally, it is important to mention that interventions which focus on the activation of motives can only be small contributors for slow fashion behaviors. Although these interventions could be improved, the effect sizes of all studies were small. The effect of peer endorsers, especially friends or relatives, on the other hand seems promising to affect sustainable forms of behavior according to other studies (Mangleburg et al., 2004; Gaied & Rached, 2010; Afsar, et al., 2016) but was low for our experiments in Study 2. Facing global environmental challenges, marketing campaigns which try to meet the value base of certain target groups, constitute only a part of the puzzle. Policy responses need to be found at this point to make the link between individual anti-environmental behavior and resulting negative consequences visible.

References

- Afsar, B., Badir, Y., & Kiani, U. S. (2016). Linking spiritual leadership and employee pro-environmental behavior: The influence of workplace spirituality, intrinsic motivation, and environmental passion. *Journal of Environmental Psychology*, 45, 79-88. <https://doi.org/10.1016/j.jenvp.2015.11.011>
- Aiama, D., Carbone, G., Cator, D., & Challender, D. (2016). Biodiversity risks and opportunities in the apparel sector. *International Union for Conservation of Nature: Gland, Switzerland*.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting social behavior. Englewood Cliffs, NJ: Prentice-Hall
- Armstrong, C. M., Niinimäki, K., Kujala, S., Karell, E., & Lang, C. (2015). Sustainable product-service systems for clothing: exploring consumer perceptions of consumption alternatives in Finland. *Journal of Cleaner production*, 97, 30-39. <https://doi.org/10.1016/j.jclepro.2014.01.046>
- Asensio, O. I., & Delmas, M. A. (2015). Nonprice incentives and energy conservation. *Proceedings of the National Academy of Sciences*, 112(6), E510-E515.
- Bapna, R., & Umyarov, A. (2015). Do your online friends make you pay? A randomized field experiment on peer influence in online social networks. *Management Science*, 61(8), 1902-1920. <https://doi.org/10.1287/mnsc.2014.2081>
- Barry, C. M., & Wentzel, K. R. (2006). Friend influence on prosocial behavior: The role of motivational factors and friendship characteristics. *Developmental psychology*, 42(1), 153. <https://doi.org/10.1037/0012-1649.42.1.153>
- Birch, D., Memery, J., & Kanakarathne, M. D. S. (2018). The mindful consumer: Balancing egoistic and altruistic motivations to purchase local food. *Journal of Retailing and Consumer Services*, 40, 221-228. <https://doi.org/10.1016/j.jretconser.2017.10.013>
- Bolderdijk, J. W., Steg, L., Geller, E. S., Lehman, P. K., & Postmes, T. (2013). Comparing the effectiveness of monetary versus moral motives in environmental campaigning. *Nature Climate Change*, 3(4), 413. <https://doi.org/10.1038/nclimate1767>
- Brown, K. W., & Kasser, T. (2005). Are psychological and ecological well-being compatible? The role of values, mindfulness, and lifestyle. *Social Indicators Research*, 74(2), 349-368. <https://doi.org/10.1007/s11205-004-8207-8>

- Brugarolas Mollá-Bauzá, M. M., Martínez-Carrasco, L., Martínez-Poveda, A. & Pérez, M. R. (2005). Determination of the surplus that consumers are willing to pay for an organic wine. *Spanish Journal of Agricultural Research*, 3(1), 43-51.
- Chen-Yu, J. H., & Seock, Y. K. (2002). Adolescents' clothing purchase motivations, information sources, and store selection criteria: a comparison of male/female and impulse/nonimpulse shoppers. *Family and Consumer Sciences Research Journal*, 31(1), 50-77.
- Choi, S., & Ng, A. (2011). Environmental and economic dimensions of sustainability and price effects on consumer responses. *Journal of business ethics*, 104(2), 269-282. <https://doi.org/10.1007/s10551-011-0908-8>
- Cialdini, R. B., Reno, R. R., & Kallgren, C. A. (1990). A focus theory of normative conduct: recycling the concept of norms to reduce littering in public places. *Journal of personality and social psychology*, 58(6), 1015. <http://dx.doi.org/10.1037/00223514.58.6.1015>
- Cialdini, R. B., & Cialdini, R. B. (1993). *Influence: The psychology of persuasion*.
- Cobbing, M., & Vicaire, Y. (2017). Fashion at the Crossroads: a review of initiatives to slow and close the loop in the fashion industry. *Hamburg, Greenpeace eV Germany*, 107, 107.
- Connell, K. Y. H. (2010). Internal and external barriers to eco-conscious apparel acquisition. *International Journal of Consumer Studies*, 34(3), 279-286. <https://doi.org/10.1111/j.1470-6431.2010.00865.x>
- Corral-Verdugo, V., Mireles-Acosta, J. F., Tapia-Fonllem, C., & Fraijo-Sing, B. (2011). Happiness as correlate of sustainable behavior: A study of pro-ecological, frugal, equitable and altruistic actions that promote subjective wellbeing. *Human Ecology Review*, 95-104. <https://www.jstor.org/stable/24707465>
- Costa Pinto, D., Herter, M. M., Rossi, P., & Borges, A. (2014). Going green for self or for others? Gender and identity salience effects on sustainable consumption. *International Journal of Consumer Studies*, 38(5), 540-549. <https://doi.org/10.1111/ijcs.12114>
- Csutora, M. (2012). One more awareness gap? The behavior–impact gap problem. *Journal of consumer policy*, 35(1), 145-163.
- De Dominicis, S., Schultz, P., & Bonaiuto, M. (2017). Protecting the environment for self-interested reasons: Altruism is not the only pathway to sustainability. *Frontiers in psychology*, 8, 1065. <https://doi.org/10.3389/fpsyg.2017.01065>
- De Groot, J. I. M., & Steg, L. (2008). Value orientations to explain beliefs related

- to environmental significant behavior: How to measure egoistic, altruistic, and biospheric value orientations. *Environment and Behavior*, 40, 330-354. doi:10.1177/0013916506297831
- De Groot, J. I., & Steg, L. (2009). Mean or green: which values can promote stable pro-environmental behavior?. *Conservation Letters*, 2(2), 61-66. <https://doi.org/10.1111/j.1755-263X.2009.00048.x>
- Demarque, C., Charalambides, L., Hilton, D. J., & Waroquier, L. (2015). Nudging sustainable consumption: The use of descriptive norms to promote a minority behavior in a realistic online shopping environment. *Journal of Environmental Psychology*, 43, 166-174. <https://doi.org/10.1016/j.jenvp.2015.06.008>
- Diekmann, A., & Preisendörfer, P. (2003). Green and greenback: The behavioral effects of environmental attitudes in low-cost and high-cost situations. *Rationality and Society*, 15(4), 441-472.
- Dreezens, E., Martijn, C., Tenbült, P., Kok, G., & De Vries, N. K. (2005). Food and values: an examination of values underlying attitudes toward genetically modified-and organically grown food products. *Appetite*, 44(1), 115-122.
- Dunlap, R. E., Van Liere, K. D., Mertig, A. G., & Jones, R. E. (2000). Measuring Endorsement of the New Ecological Paradigm: A Revised NEP Scale—Statistical Data Included. *Journal of social issues*, 56(3), 425-442.
- Durantini, M. R., Albarracin, D., Mitchell, A. L., Earl, A. N., & Gillette, J. C. (2006). Conceptualizing the influence of social agents of behavior change: A meta-analysis of the effectiveness of HIV-prevention interventionists for different groups. *Psychological bulletin*, 132(2), 212. <https://doi.org/10.1037/0033-2909.132.2.212>
- Eckhardt, G. M., Belk, R., & Devinney, T. M. (2010). Why don't consumers consume ethically?. *Journal of Consumer Behavior*, 9(6), 426-436. <https://doi.org/10.1002/cb.332>
- Ellis, J. L., McCracken, V. A., & Skuza, N. (2012). Insights into willingness to pay for organic cotton apparel. *Journal of Fashion Marketing and Management: An International Journal*, 16(3), 290-305. <https://doi.org/10.1108/13612021211246053>
- Feiler, D. C., Tost, L. P., & Grant, A. M. (2012). Mixed reasons, missed givings: The costs of blending egoistic and altruistic reasons in donation requests. *Journal of Experimental Social Psychology*, 48(6), 1322-1328. <https://doi.org/10.1016/j.jesp.2012.05.014>
- Festinger, L. (1957). *A theory of cognitive dissonance* (Vol. 2). Stanford university press.

- Fornara, F., Carrus, G., Passafaro, P., & Bonnes, M. (2011). Distinguishing the sources of normative influence on proenvironmental behaviors: The role of local norms in household waste recycling. *Group Processes & Intergroup Relations*, 14(5), 623-635. <https://doi.org/10.1177/1368430211408149>
- Frey, B. S., & Pommerehne, W. W. (1993). On the fairness of pricing—an empirical survey among the general population. *Journal of Economic Behavior & Organization*, 20(3), 295-307. [https://doi.org/10.1016/0167-2681\(93\)90027-M](https://doi.org/10.1016/0167-2681(93)90027-M)
- Gaied, A. M., & Rached, K. S. B. (2010). The persuasive effectiveness of famous and non famous endorsers in advertising. *IBIMA Business review*. <https://doi.org/10.5171/2010.474771>
- Gam, H. J., Cao, H., Farr, C., & Kang, M. (2010). Quest for the eco-apparel market: a study of mothers' willingness to purchase organic cotton clothing for their children. *International Journal of Consumer Studies*, 34(6), 648-656. <https://doi.org/10.1111/j.1470-6431.2010.00898.x>
- Gardemin, D. & Kleinhüchelkotten, S. (2017). Slow Fashion—Chancen für einen nachhaltigen Kleidungskonsum? In *CSR und Wirtschaftspsychologie* (pp. 279-296). Springer Gabler, Berlin, Heidelberg.
- Gasiorowska, A., Zaleskiewicz, T., & Wygrab, S. (2012). Would you do something for me? The effects of money activation on social preferences and social behavior in young children. *Journal of Economic Psychology*, 33(3), 603-608. <https://doi.org/10.1016/j.joep.2011.11.007>
- Gilg, A., Barr, S., & Ford, N. (2005). Green consumption or sustainable lifestyles? Identifying the sustainable consumer. *Futures*, 37(6), 481-504. <https://doi.org/10.1016/j.futures.2004.10.016>
- Goldstein, N. J., Cialdini, R. B., & Griskevicius, V. (2008). A room with a viewpoint: Using social norms to motivate environmental conservation in hotels. *Journal of Consumer Research*, 35(3), 472-482. <https://doi.org/10.1086/586910>
- Gray, S. (2017). *Mapping Clothing Impacts in Europe: the Environmental Cost*. European Clothing Action Plan (ECAP). Branbury: WRAP. Retrieved from <http://www.ecap.eu.com/wp-content/uploads/2018/07/Mapping-clothing-impacts-in-Europe.pdf> [06.03.19]
- Greenpeace (2014). A little story of monstrous mess II. Investigation of hazardous chemicals in the wastewater from dyeing facilities in Shishi China. Retrieved from

- <http://www.greenpeace.org/eastasia/publications/reports/toxics/2014/little-story-mess-2/> [26.03.19].
- Greenpeace (2015). Wegwerfware Kleidung. Repräsentative Umfrage zu Kaufverhalten, Tragedauer und der Entsorgung von Mode. Abgerufen von https://www.greenpeace.de/sites/default/files/publications/20151123_greenpeace_modekonsum_flyer.pdf
- Greenpeace (2018). Destination Zero: seven years of detoxing the clothing industry. Retrieved from <https://www.greenpeace.org/international/publication/17612/destination-zero/> [11.04.19]
- Griggs, D., Stafford-Smith, M., Gaffney, O., Rockström, J., Öhman, M. C., Shyamsundar, P. & Noble, I. (2013). Sustainable development goals for people and planet. *Nature*, 495(7441), 305-307.
- Griskevicius, V., Tybur, J. M. & Van Den Bergh, B. (2010). Going green to be seen: Status, reputation, and conspicuous conservation. *Journal of Personality and Social Psychology*, 98(3), 392-404. <http://doi.org/10.1037/a0017346>
- Grolleau, G., Ibanez, L., & Mzoughi, N. (2009). Too much of a good thing? Why altruism can harm the environment?. *Ecological Economics*, 68(7), 2145-2149. <https://doi.org/10.1016/j.ecolecon.2009.02.020>
- Grønhøj, A., & Thøgersen, J. (2012). Action speaks louder than words: The effect of personal attitudes and family norms on adolescents' pro-environmental behavior. *Journal of Economic Psychology*, 33(1), 292-302. <https://doi.org/10.1016/j.joep.2011.10.001>
- Ha-Brookshire, J. E., & Norum, P. S. (2011). Willingness to pay for socially responsible products: case of cotton apparel. *Journal of consumer Marketing*, 28(5), 344-353. <https://doi.org/10.1108/07363761111149992>
- Han, Y., & Hansen, H. (2012). Determinants of Sustainable Food Consumption: A meta-analysis using a traditional and a structural equation modelling approach. *International Journal of Psychological Studies*, 4(1), 22. <https://doi.org/10.5539/ijps.v4n1p22>
- Handgraaf, M. J., de Juede, M. A. V. L., & Appelt, K. C. (2013). Public praise vs. private pay: Effects of rewards on energy conservation in the workplace. *Ecological Economics*, 86, 86-92. <https://doi.org/10.1016/j.ecolecon.2012.11.008>
- Hiller Connell, K. Y. (2009). Exploration of second-hand apparel acquisition behaviors and barriers. In ITAA 2009 Proceedings# 66. *International Textile and Apparel Association, Inc.*
- Hiller Connell, K. Y., & Kozar, J. M. (2012). Social normative influence: An exploratory study investigating its effectiveness in increasing engagement in sustainable apparel-

- purchasing behaviors. *Journal of Global Fashion Marketing*, 3(4), 172-179. <https://doi.org/10.1080/20932685.2012.10600847>
- Hiscox, M. J., & Smyth, N. F. (2006). Is there consumer demand for improved labor standards? Evidence from field experiments in social labeling. *Department of Government, Harvard University*.
- Hwang, L. (2008). *Water Management in China's Apparel and Textile Factories. Business for Social Responsibility*, San Francisco, CA.
- Isenhour, C., & Ardenfors, M. (2009). Gender and sustainable consumption: policy implications. *International Journal of Innovation and Sustainable Development*, 4(2-3), 135-149. <https://doi.org/10.1504/IJISD.2009.028068>
- Iwanow, H., Mc Eachern, M. G. & Jeffrey, A. (2005) The influence of ethical trading policies on consumer apparel purchase decisions. *International Journal of Retail & Distribution Management*, 33(5), 371-387.
- Jacob, C., Guéguen, N., Ardiccioni, R., & Sénémeaud, C. (2013). Exposure to altruism quotes and tipping behavior in a restaurant. *International Journal of Hospitality Management*, 32, 299-301. <https://doi.org/10.1016/j.ijhm.2012.03.003>
- Jayasankaraprasad, C., & Kathyayani, G. (2014). Cross-format shopping motives and shopper typologies for grocery shopping: a multivariate approach. *The International Review of Retail, Distribution and Consumer Research*, 24(1), 79-115. <https://doi.org/10.1080/09593969.2013.801358>
- Jen-Hung, H., & Yi-Chun, Y. (2010). Gender differences in adolescents' online shopping motivations. *African Journal of Business Management*, 4(6), 849-857.
- Juvan, E., & Dolnicar, S. (2014). The attitude-behavior gap in sustainable tourism. *Annals of Tourism Research*, 48, 76-95. <https://doi.org/10.1016/j.annals.2014.05.012>
- Kaiser, F. G., Hübner, G., & Bogner, F. X. (2005). Contrasting the Theory of Planned Behavior with the Value-Belief-Norm Model in Explaining Conservation Behavior. *Journal of applied social psychology*, 35(10), 2150-2170. <https://doi.org/10.1111/j.1559-1816.2005.tb02213.x>
- Kallgren, C. A., Reno, R. R., & Cialdini, R. B. (2000). A focus theory of normative conduct: When norms do and do not affect behavior. *Personality and social psychology bulletin*, 26(8), 1002-1012. <https://doi.org/10.1177/01461672002610009>
- Kant, R. (2012). Textile dyeing industry an environmental hazard. *Natural science*, 4(1), 22-26. <http://dx.doi.org/10.4236/ns.2012.41004>

- Kareklas, I., Carlson, J. R., & Muehling, D. D. (2014). "I eat organic for my benefit and yours": Egoistic and altruistic considerations for purchasing organic food and their implications for advertising strategists. *Journal of Advertising*, 43(1), 18-32. <https://doi.org/10.1080/00913367.2013.799450>
- Keresztes, N., Piko, B. F., Pluhar, Z. F., & Page, R. M. (2008). Social influences in sports activity among adolescents. *The journal of the Royal Society for the Promotion of Health*, 128(1), 21-25. <https://doi.org/10.1177/1466424007085228>
- Kibbe, A., Bogner, F. X. & Kaiser, F. G. (2014). Exploitative vs. appreciative use of nature – Two interpretations of utilization and their relevance for environmental education. *Studies in Educational Evaluation*, 41, 106-112. <https://doi.org/10.1016/j.stueduc.2013.11.007>
- Kim, H., Lee, E. J., & Hur, W. M. (2012). The mediating role of norms in the relationship between green identity and purchase intention of eco-friendly products. *Human Ecology Review*, 125-135. <https://www.jstor.org/stable/24707751>
- Kirchgässner, G. (1992). Towards a theory of low-cost decisions. *European journal of political economy*, 8(2), 305-320. [https://doi.org/10.1016/0176-2680\(92\)90028-F](https://doi.org/10.1016/0176-2680(92)90028-F)
- Kiviniemi, M. T., Snyder, M., & Omoto, A. M. (2002). Too many of a good thing? The effects of multiple motivations on stress, cost, fulfillment, and satisfaction. *Personality and Social Psychology Bulletin*, 28(6), 732-743. <https://doi.org/10.1177/0146167202289003>
- Klein, S. A., & Hilbig, B. E. (2018). How virtual nature experiences can promote pro-environmental behavior. *Journal of Environmental Psychology*, 60, 41-47. <https://doi.org/10.1016/j.jenvp.2018.10.001>
- Kleinhüchelkotten, S., Neitzke, H., & Moser, S. (2016). Repräsentative Erhebung von Pro-Kopf-Verbräuchen natürlicher Ressourcen in Deutschland (nach Bevölkerungsgruppen).
Abgerufen von https://boris.unibe.ch/85892/1/texte_39_2016_repraesentative_erhebung_von_pro-kopf-verbraeuchen_natuerlicher_ressourcen.pdf [14.03.19]
- Klößner, C. A. (2013). A comprehensive model of the psychology of environmental behavior—A meta-analysis. *Global environmental change*, 23(5), 1028-1038. <https://doi.org/10.1016/j.gloenvcha.2013.05.014>
- Kormos, C., Gifford, R., & Brown, E. (2015). The influence of descriptive social norm information on sustainable transportation behavior: a field experiment. *Environment and Behavior*, 47(5), 479-501. <https://doi.org/10.1177/0013916513520416>

- Kozar, J. M., & Hiller Connell, K. Y. (2013). Socially and environmentally responsible apparel consumption: knowledge, attitudes, and behaviors. *Social responsibility journal*, 9(2), 315-324. DOI: 10.1108/SRJ-09-2011-0076
- Kurt, D., Inman, J. J., & Argo, J. (2010). *How Friends Promote Consumer Spending*. ACR North American Advances.
- Laroche, M., Bergeron, J., & Barbaro-Forleo, G. (2001). Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of consumer marketing*, 18(6), 503-520.
- Lee, K. (2010). The green purchase behavior of Hong Kong young consumers: The role of peer influence, local environmental involvement, and concrete environmental knowledge. *Journal of international consumer marketing*, 23(1), 21-44. <https://doi.org/10.1080/08961530.2011.524575>
- Leygue, C., Ferguson, E., & Spence, A. (2017). Saving energy in the workplace: why, and for whom?. *Journal of Environmental Psychology*, 53, 50-62. <https://doi.org/10.1016/j.jenvp.2017.06.006>
- Lindenberg, S., & Steg, L. (2007). Normative, gain and hedonic goal frames guiding environmental behavior. *Journal of Social issues*, 63(1), 117.
- Luchs, M. G., & Mooradian, T. A. (2012). Sex, personality, and sustainable consumer behavior: Elucidating the gender effect. *Journal of Consumer Policy*, 35(1), 127-144. <https://doi.org/10.1007/s10603-011-9179-0>
- Lundblad, L., & Davies, I. A. (2016). The values and motivations behind sustainable fashion consumption. *Journal of Consumer Behavior*, 15(2), 149-162. <https://doi.org/10.1002/cb.1559>
- Magnusson, M. K., Arvola, A., Koivisto Hursti, U. K., Åberg, L., & Sjöden, P. O. (2001). Attitudes towards organic foods among Swedish consumers. *British food journal*, 103(3), 209-227. <https://doi.org/10.1108/00070700110386755>
- Magnusson, M. K., Arvola, A., Hursti, U. K. K., Åberg, L., & Sjöden, P. O. (2003). Choice of organic foods is related to perceived consequences for human health and to environmentally friendly behavior. *Appetite*, 40(2), 109-117. [https://doi.org/10.1016/S0195-6663\(03\)00002-3](https://doi.org/10.1016/S0195-6663(03)00002-3)
- Mangleburg, T. F., Doney, P. M., & Bristol, T. (2004). Shopping with friends and teens' susceptibility to peer influence. *Journal of retailing*, 80(2), 101-116. <https://doi.org/10.1016/j.jretai.2004.04.005>

- Matthews, D., & Hodges, N. N. (2016). Clothing swaps: An exploration of consumer clothing exchange behaviors. *Family and Consumer Sciences Research Journal*, 45(1), 91-103.
- Matook, S., Brown, S. A., & Rolf, J. (2015). Forming an intention to act on recommendations given via online social networks. *European Journal of Information Systems*, 24(1), 76-92.
- Melnyk, V., van Herpen, E., & van Trijp, H. C. (2010). *Determinants of the influence of social norms on consumer behavior: A meta-analysis*. Working Paper.
- Miao, L., & Wei, W. (2013). Consumers' pro-environmental behavior and the underlying motivations: A comparison between household and hotel settings. *International Journal of Hospitality Management*, 32, 102-112. <https://doi.org/10.1016/j.ijhm.2012.04.008>
- Mitchell, T. R. (1997). Matching motivational strategies with organizational contexts. *Research in organizational behavior*, 19, 57-150.
- Moore, S. B., & Wentz, M. (2009). Eco-labeling for textiles and apparel. In *Sustainable Textiles* (pp. 214-230). Woodhead Publishing.
- Moser, A. K. (2015). Thinking green, buying green? Drivers of pro-environmental purchasing behavior. *Journal of Consumer Marketing*, 32(3), 167-175. <http://dx.doi.org/10.1108/JCM-10-2014-1179>
- Moser, S., & Kleinhüchelkotten, S. (2018). Good intents, but low impacts: diverging importance of motivational and socioeconomic determinants explaining pro-environmental behavior, energy use, and carbon footprint. *Environment and behavior*, 50(6), 626-656. <https://doi.org/10.1177/0013916517710685>
- Motlagh, J., & Saha, A. (2014). The Ghosts of Rana Plaza: In Bangladesh, one year after the worst accident in the history of the garment industry, recovery remains a fragile process, justice seems elusive, and reform has a long way to go. *Virginia quarterly review*, 90(2), 44-89.
- Mueller, S., Sirieix, L., & Remaud, H. (2011, June). Are personal values related to sustainable attribute choice?. In 6th AWBR International Conference.
- Mukherjee, S. (2015). Environmental and social impact of fashion: Towards an eco-friendly, ethical fashion. *International Journal of Interdisciplinary and Multidisciplinary Studies*, 2(3), 22-35.
- Nolan, J. M., Schultz, P. W., Cialdini, R. B., Goldstein, N. J., & Griskevicius, V. (2008). Normative social influence is underdetected. *Personality and social psychology bulletin*, 34(7), 913-923. <https://doi.org/10.1177/0146167208316691>

- Nyambura, C. (2018). Repoliticising women's rights in development: young African feminisms at the cutting edge. *Gender & Development*, 26(3), 423-437. <https://doi.org/10.1080/13552074.2018.1523284>
- Oskamp, S. (1995). Resource conservation and recycling: Behavior and policy. *Journal of Social Issues*, 51(4), 157-177. <https://doi.org/10.1111/j.1540-4560.1995.tb01353.x>
- Ostertag, F. (2017). Umweltfreundliches Verhalten am Arbeitsplatz–Analyse der Determinanten und Untersuchung eines umfassenden Modells.
- Petty, R. E., & Cacioppo, J. T. (1986). The elaboration likelihood model of persuasion. In *Communication and persuasion* (pp. 1-24). Springer, New York, NY. https://doi.org/10.1007/978-1-4612-4964-1_1
- Poškus, M. S. (2016). Using social norms to encourage sustainable behavior: A meta-analysis.
- Puska, P., Kurki, S., Lähdesmäki, M., Siltaoja, M., & Luomala, H. (2018). Sweet taste of prosocial status signaling: When eating organic foods makes you happy and hopeful. *Appetite*, 121, 348-359. <https://doi.org/10.1016/j.appet.2017.11.102>
- Ranganath, K. A., Spellman, B. A., & Joy-Gaba, J. A. (2010). Cognitive “category-based induction” research and social “persuasion” research are each about what makes arguments believable: A tale of two literatures. *Perspectives on Psychological Science*, 5(2), 115-122. <https://doi.org/10.1177/1745691610361604>
- Robertson, J. L., & Barling, J. (2013). Greening organizations through leaders' influence on employees' pro-environmental behaviors. *Journal of Organizational Behavior*, 34(2), 176-194. <https://doi.org/10.1002/job.1820>
- Rokeach, M. (1973). *The nature of human values*. Free press.
- Scalici, F., & Schulz, P. J. (2014). Influence of perceived parent and peer endorsement on adolescent smoking intentions: parents have more say, but their influence wanes as kids get older. *PLoS One*, 9(7), e101275. <https://doi.org/10.1371/journal.pone.0101275>
- Scholl, G., Gossen, M., Holzhauser & Schipperges. (2016). *Umweltbewusstsein in Deutschland 2016. Ergebnisse einer repräsentativen Bevölkerungsumfrage (BMUB Bericht Nr. 11)*. Abgerufen von <https://www.umweltbundesamt.de/publikationen/umweltbewusstsein-in-deutschland-2016> [26.03.19].
- Schultz, P. W. (2001). The structure of environmental concern: Concern for self, other people, and the biosphere. *Journal of environmental psychology*, 21(4), 327-339.

- Schultz, P. W. (2002). Inclusion with nature: The psychology of human-nature relations. In *Psychology of sustainable development* (pp. 61-78). Springer, Boston, MA.
https://doi.org/10.1007/978-1-4615-0995-0_4
- Schultz, P. W., Nolan, J. M., Cialdini, R. B., Goldstein, N. J., & Griskevicius, V. (2007). The constructive, destructive, and reconstructive power of social norms. *Psychological science*, 18(5), 429-434. <https://doi.org/10.1111/j.1467-9280.2007.01917.x>
- Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In *Advances in experimental social psychology* (Vol. 25, pp. 1-65). Academic Press. [https://doi.org/10.1016/S006526-01\(08\)60281-6](https://doi.org/10.1016/S006526-01(08)60281-6)
- Schwartz, S. H. (2012). An overview of the Schwartz theory of basic values. *Online readings in Psychology and Culture*, 2(1), 2307-0919.
- Steckenreuter, A., & Wolf, I. D. (2013). How to use persuasive communication to encourage visitors to pay park user fees. *Tourism Management*, 37, 58-70. <https://doi.org/10.1016/j.tourman.2013.01.010>
- Steg, L. (2016). Values, norms, and intrinsic motivation to act proenvironmentally. *Annual Review of Environment and Resources*, 41, 277-292.
- Steg, L., Dreijerink, L., & Abrahamse, W. (2005). Factors influencing the acceptability of energy policies: A test of VBN theory. *Journal of environmental psychology*, 25(4), 415-425. <https://doi.org/10.1016/j.jenvp.2005.08.003>
- Steg, L., de Groot, J. I. M., Dreijerink, L., Abrahamse, W., & Siero, F. (2011). General antecedents of personal norms, policy acceptability, and intentions: The role of values, worldviews, and environmental concern. *Society & Natural Resources*, 24, 349-367. doi:10.1080/08941920903214116
- ¹Steg, L., Perlaviciute, G., Van der Werff, E., & Lurvink, J. (2014). The significance of hedonic values for environmentally relevant attitudes, preferences, and actions. *Environment and behavior*, 46(2), 163-192. <https://doi.org/10.1177/0013916512454730>
- ²Steg, L., Bolderdijk, J. W., Keizer, K., & Perlaviciute, G. (2014). An integrated framework for encouraging pro-environmental behavior: The role of values, situational factors and goals. *Journal of Environmental psychology*, 38, 104-115.
<https://doi.org/10.1016/j.jenvp.2014.01.002>
- Steg, L., Lindenberg, S., & Keizer, K. (2016). Intrinsic motivation, norms and environmental behavior: the dynamics of overarching goals. *International Review of Environmental and Resource Economics*, 9(1-2), 179-207. DOI: 10.1561/101.000000077

- Steinberg, L., & Monahan, K. C. (2007). Age differences in resistance to peer influence. *Developmental psychology*, 43(6), 1531. <http://dx.doi.org/10.1037/00121649.43.6.1531>
- Steiner, B. E., Peschel, A. O., & Grebitus, C. (2017). Multi-product category choices labeled for ecological footprints: Exploring psychographics and evolved psychological biases for characterizing latent consumer classes. *Ecological Economics*, 140, 251-264. <https://doi.org/10.1016/j.ecolecon.2017.05.009>
- Stern, P. C. (2000). Toward a coherent theory of environmentally significant behavior. *Journal of Social Issues*, 56(3), 407-424. <https://doi.org/10.1111/0022-4537.00175>
- Sundie, J. M., Kenrick, D. T., Griskevicius, V., Tybur, J. M., Vohs, K. D., & Beal, D. J. (2011). Peacocks, Porsches, and Thorstein Veblen: Conspicuous consumption as a sexual signaling system. *Journal of personality and social psychology*, 100(4), 664. <http://dx.doi.org/10.1037/a0021669>
- Thøgersen, J., & Ölander, F. (2003). Spillover of environment-friendly consumer behavior. *Journal of environmental psychology*, 23(3), 225-236. [https://doi.org/10.1016/S0272-4944\(03\)00018-5](https://doi.org/10.1016/S0272-4944(03)00018-5)
- Thøgersen, J., & Schrader, U. (2012). From knowledge to action—new paths towards sustainable consumption. *Journal of Consumer Policy*, 35(1), 1-5. <https://doi.org/10.1007/s10603-012-9188-7>
- Thøgersen, J. (2014). Unsustainable consumption. *European Psychologist*. <https://doi.org/10.1027/1016-9040/a000176>
- Thomas, C., & Sharp, V. (2013). Understanding the normalisation of recycling behavior and its implications for other pro-environmental behaviors: A review of social norms and recycling. *Resources, Conservation and Recycling*, 79, 11-20.
- Tripathi, A., & Singh, M. P. (2016). Determinants of sustainable/green consumption: a review. *International Journal of Environmental Technology and Management*, 19(3-4), 316-358. <https://doi.org/10.1504/IJETM.2016.082258>
- Van den Broek, K., Bolderdijk, J. W., & Steg, L. (2017). Individual differences in values determine the relative persuasiveness of biospheric, economic and combined appeals. *Journal of Environmental Psychology*, 53, 145-156. <https://doi.org/10.1016/j.jenvp.2017.07.009>
- Verhoef, P. C., & Van Doorn, J. (2016). Segmenting consumers according to their purchase of products with organic, fair-trade, and health labels. *Journal of Marketing Behavior*, 2(1), <https://doi.org/10.1561/107.000000026>

- Verma, D. P. S., & Gupta, S. S. (2004). Does higher price signal better quality?. *Vikalpa*, 29(2), 67-78. <https://doi.org/10.1177/0256090920040206>
- Vohs, K. D., Mead, N. L. & Goode, M. R. (2008). Merely Activating the Concept of Money Changes Personal and Interpersonal Behavior. *Current Directions in Psychological Science*, 17(3), 208-212. <https://doi.org/10.1111/j.1467-8721.2008.00576.x>
- Wei, P. S., & Lu, H. P. (2013). An examination of the celebrity endorsements and online customer reviews influence female consumers' shopping behavior. *Computers in Human Behavior*, 29(1), 193-201.
- Weinstein, N., Balmford, A., Dehaan, C. R., Gladwell, V., Bradbury, R. B., & Amano, T. (2015). Seeing community for the trees: The links among contact with natural environments, community cohesion, and crime. *BioScience*, 65(12), 1141-1153.
- Whitmarsh, L., & O'Neill, S. (2010). Green identity, green living? The role of pro-environmental self-identity in determining consistency across diverse pro-environmental behaviors. *Journal of Environmental Psychology*, 30(3), 305-314. <https://doi.org/10.1016/j.jenvp.2010.01.003>
- Xia, L., Monroe, K. B., & Cox, J. L. (2004). The price is unfair! A conceptual framework of price fairness perceptions. *Journal of marketing*, 68(4), 1-15. <https://doi.org/10.1093/biosci/biv151>
- Yadav, R. (2016). Altruistic or egoistic: Which value promotes organic food consumption among young consumers? A study in the context of a developing nation. *Journal of Retailing and Consumer services*, 33, 92-97. <https://doi.org/10.1016/j.jretconser.2016.08.008>
- Zahavi, A. (1975). Mate selection—a selection for a handicap. *Journal of theoretical Biology*, 53(1), 205-214.
- Zelenski, J. M., Dopko, R. L., & Capaldi, C. A. (2015). Cooperation is in our nature: Nature exposure may promote cooperative and environmentally sustainable behavior. *Journal of Environmental Psychology*, 42, 24-31. <https://doi.org/10.1016/j.jenvp.2015.01.005>
- Zelezny, L. C., Chua, P. P., & Aldrich, C. (2000). Elaborating on gender differences in environmentalism. *Journal of Social issues*, 56(3), 443-458.
- Zhang, J. W., Piff, P. K., Iyer, R., Koleva, S. & Keltner, D. (2014). An occasion for unselfing: Beautiful nature leads to prosociality. *Journal of Environmental Psychology*, 37, 61-72. <https://doi.org/10.1016/j.jenvp.2013.11.008>

Ehrenwörtliche Erklärung zu meiner Dissertation mit dem Titel

„The impact of motives, prices and norms on sustainable fashion consumption“

Sehr geehrte Damen und Herren,

hiermit erkläre ich, dass ich die beigefügte Dissertation selbstständig verfasst und keine anderen als die angegebenen Hilfsmittel genutzt habe. Alle wörtlich oder inhaltlich übernommenen Stellen habe ich als solche gekennzeichnet.

Ich versichere außerdem, dass ich die beigefügte Dissertation nur in diesem und keinem anderen Promotionsverfahren eingereicht habe und, dass diesem Promotionsverfahren keine endgültig gescheiterten Promotionsverfahren vorausgegangen sind.

Hamburg, den 04.09.2020

A handwritten signature in blue ink, appearing to read 'Anette Woznica'.

Ort, Datum

Unterschrift