

Eat Today, Sustain Tomorrow

Prof dr. Marleen Onwezen | Inaugural lecture 13-09-2024





Summary

Although sustainability issues are widely acknowledged and many consumers value sustainability, they do not act consistently according to their sustainable goals. One of the most prominent questions in science and society is therefore how to foster sustainable consumer demand that endures over time and spreads across domains to reshape markets. Individual sustainable choices might feel like a drop in the ocean; however, consistent changes can have a potentially enormous impact. In my position as special professor, I aim to contribute to these relevant and complex questions. My intention is to identify the key mechanisms that support enduring sustainable consumer choices using behavioural economics.*

*Note. The presentation and written version of my inaugural lecture are grounded in the same core ideas. However, there are minor deviations between the two formats to suit their respective mediums.

Introduction

Esteemed Rector Magnificus, dear friends, family, colleagues, students, and members of my network, I am pleased to welcome you all to my inaugural lecture. Greater knowledge on the topic of enduring sustainable behaviour is needed to support sustainable transitions in society. To respond to this challenge, there is a need to integrate fundamental and applied insights. Therefore, Wageningen Economic Research and the Marketing and Consumer behaviour group, both part of Wageningen University and Research, have joined forces. They have established the special chair titled "Behavioural Economics for enduring sustainable food choices". I am extremely honoured to hold that chair.

Let's start with a question: Do you believe it is important that we value the environment and nature? And now a second question: Do you act consistently in accordance with these environmental values? Or similarly, who loves animals, and who eats meat and cheese?

Answers to these questions generally reveal a contrast between our goals and our behaviours. This is also called the intention-behaviour gap (ElHaffar et al., 2020; Vermeir & Verbeke, 2005). Thus, although consumers state that they value the environment, we see that in the Netherlands, food and beverage choices are estimated to result in 20–30% of individuals' daily environmental impact (Milieu Centraal, 2023). The most prominent element of unsustainable diets is meat and other animal-based proteins like cheese and dairy. Although we have been aware of these facts for decades, meat consumption levels have hardly changed in the past decades, and consumers currently consume 58% of their protein intake through animal-based proteins (Dagevos & Verbeke, 2022; Onwezen et al., 2024).

More sustainable consumption patterns are needed to respond to urgent planetary and animal health issues, like global warming, droughts, and biodiversity loss (e.g., Ammann et al., 2023; Willet et al., 2019). Enduring behaviour change is extremely relevant for these societal issues because the potential impact of interventions grows when their impact spreads across time. For example, if all Dutch consumers would consistently participate in one day of meatless consumption this would result in a decrease of 26% total daily environmental impact (Heerschop & 't Veer, 2022). Therefore, my focus in the upcoming years will be on enduring sustainable food choices, referring to choices that stick over time or spread across domains (i.e., also referred to as spillover).

Why is it so challenging to adopt sustainable behaviour? Consumers do not always rationally counterbalance all pros and cons. There are frictions and inconsistencies. I have received lots of inspiration from one of my favourite authors, Jonathan Safran Foer. A distinguished writer, Foer has authored several works of fiction and non-fiction. One of his brilliant books is *Eating Animals*. In this 2009 book, he is very open on his struggles. He describes his internal conflict between his love for meat and his awareness of the ethical issues surrounding the meat industry. For example, he states, "As the situation becomes ever more alarming, so does my ability to ignore the alarm". Furthermore, in various interviews, he explains in detail inconsistencies in his behaviour. For instance, he stated eating hamburgers while on a book tour, attributing this behaviour to the comfort the hamburgers provided. After writing *We Are the Weather* (2019), Foer found a dietary rule that fits his lifestyle: he eats vegan during the day and vegetarian at dinner.



Introduction

Hope in the Gaps: How Contradictions Can Spark Change

Enduring behaviour change starts with the question why behaviour is often inconsistent. Why it is difficult to follow intentions, and why we often fall back on old habits or immediate desires. I included the specific example of Jonathan Safran Foer to demonstrate that paradoxes, conflicting goals and justification strategies exist. It is easy to label Foer as inconsistent or to question the strength of his goals or values. In the upcoming years I will highlight the positive side of these inconsistencies, perceiving them not as negative but as a starting point for change and as leverage points to develop interventions towards enduring change.

Simply stated, I will use the following decision model. Consumers might demonstrate inconsistencies due to conflicts between values and behaviour, which might be triggered and enforced by internal processes (like long-term ambitions and short-term cravings, individual and societal benefits) and external processes (like the temptations and distractions of the social and physical environment). The resulting friction, uneasiness, negative feelings, dissonance and ambivalence are examples of a starting point to leverage change. This results in intriguing internal processes, as there are several possible routes to reconcile these feelings. Consumers are extremely capable of justifying their behaviour and finding strategies to keep up a positive self-image and good feelings, and another route is behaviour change. So how can we funnel consumers towards this route?

My main ambition in the upcoming years is to identify the main internal and external triggers to support more enduring sustainable choices. By applying and advancing behavioural economics to go beyond the short-term, I aim to inspire a broader utility function including psychological rewards like key mechanisms of positive emotions and social status that explain and support enduring consumer decision making. This results in three proposed societal and scientific contributions.

1. I will further explore how perceived inconsistencies can be triggered within individuals and under which circumstances they can support enduring behaviour change.
2. I will unravel whether the food environment currently makes it easier to ignore inconsistencies and how this can be turned around to support enduring sustainable choices.
3. I will focus on various groups of consumers in the transition towards more sustainable choices, as some groups have weaker intentions, ambiguous feelings or no intentions at all, highlighting the need to tailor interventions to specific groups of consumers.

In the upcoming years, I will focus on the fundamental processes of enduring behaviour change, and how these processes like perceptions of inconsistencies within an individual or triggered by the environment can foster behaviour change towards more enduring sustainable choices across various groups of consumers.

In what follows, I outline the two main advancements I see within the field of behavioural economics. These advancements also relate to three contributions to science and society based on past, ongoing and future work.



Using the Full Potential of Behavioral Economics

Behavioural economics is a science that combines elements of economics and psychology to understand how and why people behave in a specific way. Psychologists excel at diving deep into details and understanding key mechanisms, generally resulting in a wide overview of relevant drivers of behaviour. Economists excel at simplifying the world and developing theories to understand market mechanisms. However, in order to simplify reality, generally strict assumptions like the assumption of rational decision making must be made. Both perspectives have their advantages and disadvantages. Both perspectives result in different approaches, methods and key mechanisms, contrasting economic rationality with a broader value perspective. Behavioural economics has the potential to combine the best of both worlds. It points to a set of systematic behavioural patterns that can be used to enrich understandings of human decision-making beyond rational decision-making (Kahneman, 2003). Behavioural economics includes understanding how and why people behave in a certain way and how their choices can be improved to enhance consumers' welfare (Antonides, 2023; Thaler & Sunstein, 2009).

In 1955, Herbert Simon introduced bounded rationality to challenge the notion of fully rational decision making. His concept of bounded rationality posits that individuals, facing constraints of cognitive limitations, information and time restrictions, often opt for "good enough" decisions. Simon thereby paved the way for behavioural economics. Behavioural economics is a major field that has seen significant scientific advancements in recent decades. Examples of these advancements include the valuable insights of heuristics, which show how decision-making deviates from rational assumptions (e.g., Tversky & Kahneman, 1974), or the valuable translation of behavioural economics to nudging that popularised the field in science and policies (Thaler & Sunstein, 2009). Currently, the full potential of behavioural economics is not being utilised. Humbled by the great achievements in the field, I do see possible contributions for the field of behavioural economics, the advancements of behavioural economics I aim to contribute to are specified below.

Behavioural Economics and Enduring Choices

First, within behavioural economics and in social science in general, there is currently a focus on singular instead of repeated behaviours. Specifically, in behavioural economics, nudging has become popular among scientists, policymakers and practitioners. This has led to the belief that small nudges can support desired behaviour changes. While nudging has done a great job of popularising behavioural economics and ensuring a wide range of applications, these quick and easy fixes often result in behaviour change that fades away easily (Bhargava & Loewenstein, 2015; Chater & Loewenstein, 2023). There is a contrast between the simple and quick fixes that are often overestimated in terms of true and consistent behavioural change and the need for solutions that support long-term behaviour change. I understand the appeal of terms like "simple" and "easy"—they suggest a straightforward solution to complex problems. However, this oversimplification has led many to view behavioural economics and related sciences as merely about "nudges", which are then reduced to simple interventions like placing items at eye level. There is much more potential for significantly broader applications. We need to leverage the full potential of behavioural economics, focusing on the interaction between consumers and the context of choice. While there has been progress in identifying how to encourage and support change, and while there are examples that go beyond superficial interventions, like boosting referring to interventions to foster consumers' competences (Hertwig & Grüne-Yanoff, 2017; Oliver, 2013), a major gap remains in finding solutions that lead to enduring impact.

We all think that in the future, we are wonderful people. We will be patient, we will not procrastinate, we will exercise, we will eat well The problem is we never get to live in that future. We always live in the present.

- (Dan Ariely) -

As the quote by Dan Ariely implies, there is a contrast between the present and the future. I will contribute to the advancement of behavioural economics by extending the focus of behavioural economics beyond singular choices towards consistency across choices and beyond anomalies of the utility function towards generic psychological insights generated by a psychological reward value. I envision to develop insights and interventions to support psychologically rewarding choices, resulting in more enduring behaviour change. Advancing behavioural economics to extend the focus from short-term nudges to enduring sustainable choices is a win for people, planet and profit.

Best of Both Worlds: Generalised Specifics

Behavioural economics includes a wide array of sub-disciplines, however the connection between psychology and economics remains limited (Antonides, 2023). A bibliographic overview of the behavioural economics literature reveals that its links to psychology have diminished over time, causing behavioural economics to become economics-centred (Braesemann, 2019; Truc, 2022). The field is slowly progressing from initial efforts to highlight anomalies within the standard economic model (Antonides, 2023; Truc, 2022) into a behavioural science that measures psychological phenomena and incorporates these phenomena into economic models. However, further progress is needed to explain behaviour in generic rules that can be integrated into standard economic models (Antonides, 2023).

Behavioural economics integrates both disciplines, and by doing so, I believe we can develop more comprehensive strategies for enduring behaviour change. Using the best of both worlds to develop generic rules for explanatory psychological mechanisms. More specific, in the upcoming years I envision identifying key mechanisms for enduring sustainable choices. I will rely on previous work like key consumption values (Sheth et al., 1991), the key psychological factors that drive sustainable choices (SHIFT-framework; White et al., 2019) or goal frames related to sustainable behaviour (Lindenberg & Steg, 2007; Onwezen, 2023). Moreover, this line of research has already begun to develop. Studies have started identifying key principles of behavioural economics for sustainable choices (Dawnay et al., 2011; Frederiks et al., 2015). However, no focus has been placed on enduring behaviour change, although maintained behaviour change is key to preventing and tackling future societal challenges (Michie & West, 2021). I will utilise existing theories, a systematic literature review, expert judgments and empirical testing to further identify and refine key aspects of enduring sustainable choices. Based on an initial synthesis of the literature and theories, relevant mechanisms that are psychologically rewarding are, for example, emotional rewards, a supportive social environment and moral values. This first synthesis has already been assessed by 50 experts in the field. Their answers highlight that the environment is an especially crucial element in enduring changes (see next section). These are first insights, and in the upcoming years, I aim to go beyond an overview of heuristics and biases towards a stronger connection between economics and psychology by developing key drivers of enduring choices.

Three key implications

Acknowledging that my ambitions might be high for a position of one day a week, I see three relevant implications for science and practice that emerge from advancements in behavioural economics.

The Bright Side of Inconsistencies

First, by advancing behavioural economics to go beyond singular actions towards enduring behaviour, I aim to research how and under which circumstances perceived inconsistencies occur and how these can trigger behaviour change. I aim to use the behavioural economics perspective to gain a deeper understanding of these inconsistencies. Traditional utility perspective does not include variations in preferences and behaviours, though consumers are not always consistent, conscious and rational. Their preferences might differ across time (presence bias results in different preferences now than in the future; Loewenstein, 2000) or across different contexts or moments (state dependent preferences; Van Leeuwen, 1998) or with multiple selves (Krügel & Uhl, 2023). One important route is to understand the key mechanisms for variations in preferences.

Moreover, inconsistencies might facilitate change. Just think back to Jonathan Foer, or let's take me as an example. I try to travel by public transport instead of by car, I don't consume meat and I aim to reduce my intake of animal-based products like milk and cheese. I live in a sustainable house, I try to buy second-hand clothing and toys, yet I use my car every week, cannot imagine a life without cheese, indulge in my daily Diet Coke in the afternoon, and love the occasional beer with friends. Despite my efforts to buy second-hand and limit purchases, our house is full of unnecessary items, though my minimalistic boyfriend, Maarten, is not to blame for that.

Like almost everyone, I am not always consistent. However, when friction occurs between my behaviour and values, I feel uneasiness and the motivation to get rid of that feeling. Individuals are also extremely capable of justifying personal inconsistencies by blaming external factors, ignoring information or embracing beliefs that counter animal welfare issues (Rhotgerber, 2020). However, personal frictions between values and behaviour can also lead to behavioural change. In a similar way, social frictions can occur. For example, think of a semi-vegetarian who does not eat meat (only bacon), or a person who advocates for a sustainable lifestyle who likes to go on holidays by plane or wears leather shoes. These people are easily judged. This also happens often to celebrities who commit to sustainable behaviours. When they are not fully consistent, they receive immediate negative feedback, like, for example, Carice van Houten or Georgina Verbaan. Both represent themselves as active, sustainable individuals, and their deviations have been highly criticised, such as a recent flying trip of Georgina. She received tons of negative feedback on a social media post when she went to her brother's wedding in Spain. It is easy to state that a person is not living up to their standards and that they are inconsistent, though this response might also be a justification strategy to keep up a positive self-image.

The question is therefore how to utilise friction to support sustainable transitions and how we can activate these processes. Over the past years, I have been researching the concept of dissonance. Dissonance is a perceived inconsistency between values and behaviour. Dissonance results in aversive feelings (Harmon-Jones & Mills, 2019). Alongside my PhD student Emily Bouwman, I aim to explore various forms of conflicts. We explore whether aversive feelings of dissonance can also be triggered by the environment and result in behaviour change. For example, individuals are extremely good at ignoring information that results in aversive feelings. A nice example is a study we performed in a zoo. This study was a joint effort with Emily Bouwman, Danny Taufik and Jan-Willem Bolderdijk. We found that activating values at the moment of choice by simply asking the question "what do you think about animal welfare?" doubled the number of vegetarian burgers sold. Therefore, activating sustainable values at the right moment might be an important route to support change (Bouwman et al., 2022). Moreover, as this results in deliberate and moral choices, the change might also support more enduring choices. We aim to explore these processes further in future studies.

I see perceived inconsistencies as a starting point for change. The intention-behaviour gap can be perceived in a more positive light, signifying the initiation of change. In Dutch, there's a saying, "Er is een zaaide geplant" (the seed is sown). This concept suggests that some consumers already value certain behaviours but have not yet translated these intentions into actions. It highlights a potential for transformation that has already begun to take root in individuals' beliefs and attitudes. For example, I started working on ambivalence a few years ago (Onwezen & van der Weele, 2016; Onwezen et al., 2017). Ambivalence is the idea that attitudes are not always positive or negative but can be both at the same time. Individuals may feel positive about eating meat and negative about eating meat at the same moment. This results in an aversive feeling. In collaboration with my PhD colleague Marije van Gent, and the supervisors Michel Handgraaf, Reint Jan Renes and Eveline van Leeuwen, we developed a systematic review on ambivalence and sustainable choices. One of the key findings was that ambivalence has the potential to facilitate behaviour change. Since ambivalent feelings are aversive, individuals strive to eliminate them, and behaviour change is one of the strategies they employ (van Gent et al., 2024).

In the upcoming years, I aim to explore how inconsistencies can be understood and used to trigger enduring behaviour change. I aim to develop long-term datasets and explore the prominent drivers of enduring behaviour change. The insights will be translated into interventions that go beyond superficial nudges, using the potential of behavioural economics to try to activate prominent drivers like positive emotions to pave the way for more enduring behaviour change.

Three key implications

From Individual to Societal: The Food Environment Makes it Easier to be Unsustainable

By advancing behavioural economics to further connect psychology and economics, we can bridge the gap between individual and societal factors (or the micro and macro level). Moreover, as previously noted, there has been considerable focus on nudging as a strategy for behaviour change. However, these perceived quick fixes often work only in specific contexts and moments, lacking the robustness required to counteract the powerful influences of our food environment and the marketing efforts promoting unhealthy and unsustainable choices. As highlighted by recent influential research, we need to shift from individual-level interventions (like nudges) to societal-level strategies, respectively effectively moving from the i-frame to the s-frame (Charter & Loewenstein, 2023).

Today, we face constant temptations that challenge us with unhealthy and unsustainable foods, such as candies, sodas, fast food, and animal-based products like burgers and cheese. Supermarkets are predominantly stocked with unhealthy options (Poelman et al., 2021), with animal-based proteins making up 60% of the protein products and receiving most of the marketing attention in terms of promotions, pricing and shelf space (Onwezen et al., 2024). These temptations are ubiquitous, and our willpower often falls short in resisting them. For example, a recent study revealed that moral and social goal frames are especially associated with sustainable behaviours. However, the current food environment activates mainly gain and hedonic goal frames. This finding indicates that the current food environment makes it easier to value money, taste and short-term benefits, and the food environment is not triggering the values of sustainability and long-term goals (Onwezen, 2023).

The current food environment further increases the intention-behaviour gap and makes it more difficult to maintain sustainable behaviours. The food environment establishes a norm that promotes unsustainable and unhealthy behaviour as standard and morally acceptable. The result is that we frequently fuel our bodies with unhealthy, unsustainable foods.

For instance, a recent study with Emily Bouwman and Jan-Willem Bolderdijk found that positive labelling systems create a social standard that supports meat consumption more than negative labelling systems, leading currently to increased meat choices. In the upcoming years, I aim to further explore this intriguing insight with my PhD student Houkje Adema. We will explore whether labelling can do more than just providing information. We aim to reveal that labelling products can also be used to normalise sustainable behaviours among consumers, and that these processes go via social norms.

Additionally, research conducted with my PhD student Monique van der Meer and valued colleague Arnout Fischer involved collaboration with Jumbo and Lidl to examine the effects of placing meat substitutes next to meat products. Our findings underscored the importance of point-of-purchase triggers in encouraging more conscious decisions. Placing plant-based burgers alongside meat options in the meat section increased sales, compared to when plant-based products were relegated to a separate vegetarian shelf (van der Meer et al., submitted).

Looking ahead, I see opportunity with my chair to support a transition in the food environment towards normalising sustainable choices. I hope the upcoming years will result in evidence-based insights that supports a societal debate on, for example, how to frame language (is it "animal welfare" or "animal suffering?"), how to frame labels (positive or negative label systems) and how to provide guidelines for an enabling food environment to support sustainable choices.

For now, let us start small and begin with starting to use the words "regular choice" for the sustainable option, and the words *onduurzaam* and *dieronvriendelijk* or "unsustainable" and "animal unfriendly" for all unsustainable practices instead of the other way around.

Three key implications



From Static approaches to Phases of Transition

By advancing behavioural economics to further connect psychology and economics in the context of enduring food choices, I aim to identify the key drivers of enduring change. Going back to the example of Jonathan Safran Foer, it is easy to think of him as a very engaged citizen, and that these frictions and thoughts might only apply to small and specific groups. However, there are indeed also differences among groups, and frictions and inconsistencies are present among all of us. Individuals and behaviour change cannot be perceived as static.

From an economic perspective, consumers are assumed to make similar decisions across time, while psychological research shows that behaviour is not fixed. As stated by many researchers, behaviour change unfolds in distinct phases (e.g., Prochaska & Velicer, 1997). Previous studies on the transition and adoption of novel technologies like the famous model of Rogers have described phases of societal transitions (e.g., Gonera et al., 2021). Over the past years, we have developed a wide range of studies and insights on consumer groups and dietary behaviours. Targeting interventions at specific consumer groups is important (Onwezen, 2022; Verain et al., 2022).

In the upcoming years, I envision exploring how consumer groups change over time. Enduring behaviour change is not the beginning of the transition, and personalised or targeted approaches are needed in distinct phases of behaviour change. For example, in collaboration with Jetske Bouma and Ghalia Nasar, we worked on a systematic literature review on resistance. We found resistance is more prominent in the beginning of behaviour change and that resistance to meat reduction is more social and deeply rooted, whereas resistance to plant-based alternatives is more related to practical barriers (Onwezen et al., submitted).

I envision to explore how each phase is associated with different key mechanisms of change. Examples of relevant transition phases in behaviour change are the following: indifference, ambivalence, change with inconsistencies, conscious enduring change, and new habits. Indifferent consumers might be best supported with changes in the food environment that make sustainable choices easier and more attractive. In the change with inconsistencies phase, activating sustainable values might be most important, making it harder to ignore or devalue these values or justify inconsistent behaviours. Or when performing behaviours consistently, it might be most important to support the development of new habits to assure a transition towards enduring behaviour change, for example via positive emotions.

Taking perspectives together: TIS-frame

The abovementioned recommendations might easily be perceived as separate lines, though I aim for an integrated perspective. Combining the insights of these three lines reveals that perceived inconsistencies can be influenced by the environment and might be flexible over time. In the upcoming years, I intend to highlight the importance of integrating a micro-macro level approach that includes personal variation and societal means to support transitions. For example including interventions that motivate consumers and provide a supportive environment.

In more detail, as previously noted currently a switch from interventions that focus on the individual (individual-frames) towards interventions that focus on the societal level (societal frames) are advocated. I advocate not for switching to a sole focus on a societal frame (s-frame). I advocate for progress towards a **TIS**-frame, including **T**ransitions phases, **I**ndividual and **S**ocietal frames.

The potential risk of focusing exclusively on either individual or societal interventions is the reliance on quick fixes versus the reliance on static measures and interventions that primarily emphasise cognitive explanations or strict regulations. Instead, I advocate for the relevance of both. Interventions that focus both on individual activation and motivation and a supportive environment are needed to support sustainable choices. Moreover, it is important to include the relevant phases of behaviour change (transition phases). This approach allows for personalised interventions tailored to the state of transition and provides a supportive environment that fosters positive behaviour change.



Conclusion

In conclusion, my goal is to advance the field of behavioural economics to foster lasting behaviour change, contributing both to societal progress and scientific understanding. There are two key advancements I foresee in behavioural economics, contributing to three key implications.

The first advancement of behavioural economics is applying innovative methods to promote more enduring behaviour change. By moving beyond superficial nudges, we can tap into deeper behavioural drivers, understanding and using inconsistencies in decision-making to catalyse meaningful, long-term change.

The second advancement of behavioural economics lies in strengthening the connection between psychology and economics. This integration will allow us to identify key mechanisms, such as the influence of the social environment. By expanding behavioural economics to a societal level, we can drive significant, positive shifts in both individual behaviour and broader societal norms.

Together, these advancements will enable behavioural economics to bridge individual and societal approaches, focusing on personal triggers within transitional phases while creating a supportive TIS-framework that fosters sustainable and impactful change such that **eating today sustains tomorrow.**



A Final Word of Thanks and Appreciation

I want to express my deepest gratitude to everyone who has been a part of this journey. For sure missing a lot of people, where to begin!

First and foremost, I want to highlight the importance of the warm support I've received from friends, family, and colleagues throughout this path. Reaching this significant milestone reflects not only my individual passion and motivation though also the loving and nurturing environment that has surrounded me. I have always felt embraced by a supportive and encouraging atmosphere!

Reflecting on my educational journey, I want to share some important moments that formed me. First, I started at a school with a high ethnic diversity. Although the educational level was not very high, it provided me with a broad perspective, a perspective to value different cultures, and a solid foundation for helping others. It was there that I began to appreciate the importance of looking beyond traditional boundaries. Pursuing a second master's degree was another pivotal moment. During this time, I discovered my passion for research and writing, and I found myself (again) to be the only student enthusiastic about writing a thesis. Not to speak of the great supervision of Marcel, Marijke, Marc and Michal to further inspire my enthusiasm for research.

After starting at WEcR, were I initially started with the idea to go away from science and do more applied research. Jos Bartels and Machiel Reinders, however, took me along immediately in all inspirational facets of science. We still have to look at the Vegas pictures :). I started the idea of doing a PhD. Again showing the wonderful environment of WEcR, as Ge and Marieke just said write a plan, which I only needed to hear once 😊. I enjoyed the PhD a lot. Gerrit supervised me and I am so grateful that he further inspired me to the field of behavioural economics. Almost precisely ten years ago I defended my PhD thesis on emotions.

My deepest appreciation goes to my supportive colleagues at WEcR, thank you for being the best teammates I could imagine. It is truly the best job in the world, to work in a place where I can learn and develop myself each and every day, and I feel the support, energy, and enthusiasm of my colleagues. You make each and every day great fun! Your support, openness to my ambitions, and encouragement have made every workday enjoyable and fulfilling. I appreciate every brainstorming session, your enthusiasm, and the many ideas we've shared, as well as the warm sense of being part of a supportive team that always stands by one another. I also want to extend my gratitude to my colleagues at WFBR for our inspiring collaboration and the continued growth of our journey. Additionally, I am thankful for the warm welcome and support I received from the MCB group. It feels as if I already worked there for years, thanks for all the enthusiasm, collaborations, and equal amounts of passion for research. It is a great pleasure to be part of MCB.

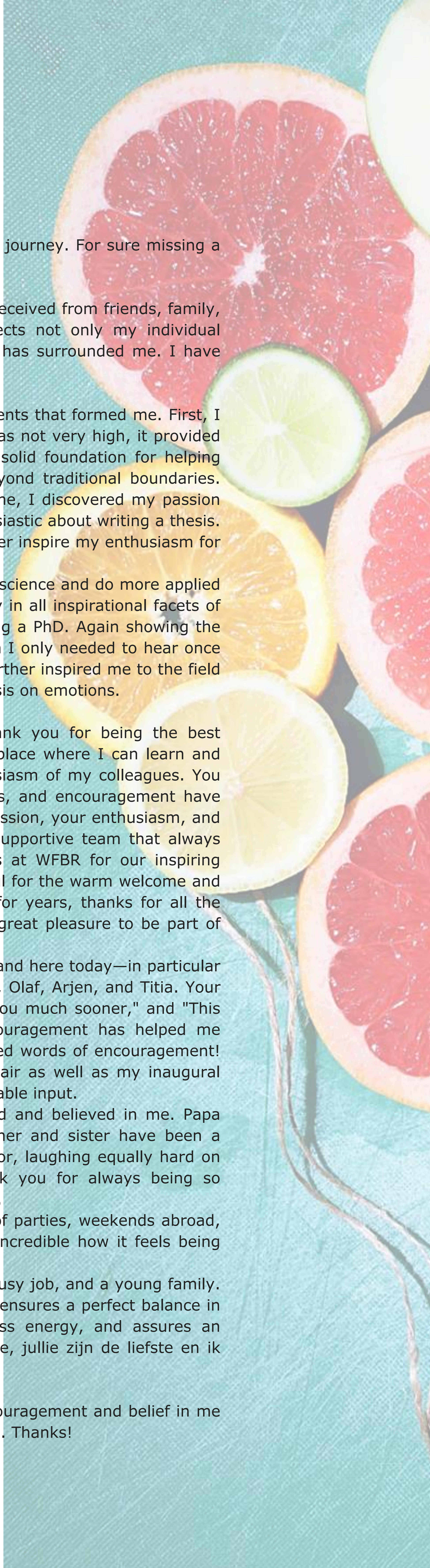
A special thanks goes to those who have been instrumental in helping me stand here today—in particular the Hanses: Hans van Trijp, Hans van Meijl, and Hans Dagevos, as well as Jack, Olaf, Arjen, and Titia. Your belief in me and your supportive words—"Go for it," "Let's do it," "I expected you much sooner," and "This ambition fits you like a glove"—have been profoundly meaningful. Your encouragement has helped me overcome all doubts and insecurities, as each and any one of you has only stated words of encouragement! Including those who supported me in different versions of the plans for my chair as well as my inaugural lecture, thanks Michel, Siet, Machiel, and the Hanses for the challenging and valuable input.

I am also deeply grateful to my family. My parents have always supported and believed in me. Papa mama thanks for the support and freedom to choose my own path. My brother and sister have been a constant source of support, and fun! Thanks for having the same sense of humor, laughing equally hard on the most stupid jokes! To all my family and family in law, I want to thank you for always being so enthusiastic and supportive. Your encouragement and positivity mean a lot to me.

To all my friends from high school, and university, I cherish the memories of parties, weekends abroad, the daily dose of humor via Whatsapp, and all the moments we shared. It is incredible how it feels being friends for so long that it feels as family. Alle liefde!

The most often asked question is probably how I manage work pressure, a busy job, and a young family. The answer is easy, my daughters Mae, Seia and Ise are fantastic, and Maarten ensures a perfect balance in everything. He knows how to celebrate even the smallest things, has endless energy, and assures an excellent balance of psychology and economics in our home. Mae, Seia, and Ise, jullie zijn de liefste en ik geniet elke dag van jullie! Maarten thank you for making every day brighter ❤️!

Finally, to everyone who has supported me along the way—thank you. Your encouragement and belief in me have been invaluable, and I am profoundly grateful for each and every one of you. Thanks!



Thanks!

Author Prof. dr. M.C. Onwezen, Marleen.Onwezen@wur.nl



References

- Ammann, J., Arbenz, A., Mack, G., Nemecek, T., & El Benni, N. (2023). A review on policy instruments for sustainable food consumption. *Sustainable Production and Consumption*, 36, 338-353.
- Antonides, G. (2023). Behavioural economic methods. *Handbook of Research Methods in Behavioural Economics: An Interdisciplinary Approach*, 14.
- Bhargava, S., & Loewenstein, G. (2015). Behavioral economics and public policy 102: Beyond nudging. *American Economic Review*, 105(5), 396-401.
- Bouwman, E. P., Bolderdijk, J. W., Onwezen, M. C., & Taufik, D. (2022). "Do you consider animal welfare to be important?" activating cognitive dissonance via value activation can promote vegetarian choices. *Journal of Environmental Psychology*, 83, 101871.
- Braesemann, F. (2019). How behavioural economics relates to psychology—some bibliographic evidence. *Journal of Economic Methodology*, 26(2), 133-146.
- Chater, N., & Loewenstein, G. (2023). The i-frame and the s-frame: How focusing on individual-level solutions has led behavioral public policy astray. *Behavioral and Brain Sciences*, 46, e147.
- Dagevos, H., & Verbeke, W. (2022). Meat consumption and flexitarianism in the Low Countries. *Meat Science*, 192, 108894.
- Dagevos, H., & Verbeke, W. (2022). Meat consumption and flexitarianism in the Low Countries. *Meat Science*, 192, 108894.
- Dawnay, E., Shah, H., Dietz, S., Michie, J., & Oughton, C. (2011). Behavioural economics. Seven Key principles for environmental policy. *The Political Economy of the Environment*, 74-97.
- ElHaffar, G., Durif, F., & Dubé, L. (2020). Towards closing the attitude-intention-behavior gap in green consumption: A narrative review of the literature and an overview of future research directions. *Journal of cleaner production*, 275, 122556.
- Frederiks, E. R., Stenner, K., & Hobman, E. V. (2015). Household energy use: Applying behavioural economics to understand consumer decision-making and behaviour. *Renewable and Sustainable Energy Reviews*, 41, 1385-1394.
- Gonera, A., Svanes, E., Bugge, A. B., Hatlebakk, M. M., Prexl, K. M., & Ueland, Ø. (2021). Moving consumers along the innovation adoption curve: A new approach to accelerate the shift toward a more sustainable diet. *Sustainability*, 13(8), 4477.
- Harmon-Jones, E., & Mills, J. (2019). An introduction to cognitive dissonance theory and an overview of current perspectives on the theory.
- Heerschop, S. N., & van't Veer, P. (2022). Rapport milieu-impact van Nederlandse voeding.
- Hertwig, R., & Grüne-Yanoff, T. (2017). Nudging and boosting: Steering or empowering good decisions. *Perspectives on Psychological Science*, 12(6), 973-986.
- Kahneman, D. (2003). Maps of bounded rationality: Psychology for behavioral economics. *American economic review*, 93(5), 1449-1475.
- Krügel, S., & Uhl, M. (2023). The behavioral economics of dynamically inconsistent behavior: a critical assessment. *Social Choice and Welfare*, 61(4), 817-833.
- Lindenberg, S., & Steg, L. (2007). Normative, gain and hedonic goal frames guiding environmental behavior. *Journal of Social Issues*, 63(1), 117-137.
- Loewenstein, G. (2000). Emotions in economic theory and economic behavior. *American economic review*, 90(2), 426-432.
- Michie, S., & West, R. (2021). Sustained behaviour change is key to preventing and tackling future pandemics. *Nature Medicine*, 27(5), 749-752.
- Milieu centraal (2023). Monitor duurzaam leven: <https://www.milieucentraal.nl/professionals/factsheets-en-rapporten/monitor-duurzaam-leven-2023/>
- Oliver, A. (2013). From nudging to budging: using behavioural economics to inform public sector policy. *Journal of social policy*, 42(4), 685-700
- Onwezen, M. C. (2023). Goal-framing theory for sustainable food behaviour: The added value of a moral goal frame across different contexts. *Food Quality and Preference*, 105, 104758.
- Onwezen, M. C., & van der Weele, C. N. (2016). When indifference is ambivalence: Strategic ignorance about meat consumption. *Food Quality and Preference*, 52, 96-105.
- Onwezen, M. C., Reinders, M. J., & Sijtsema, S. J. (2017). Understanding intentions to purchase bio-based products: The role of subjective ambivalence. *Journal of Environmental Psychology*, 52, 26-36
- Onwezen, M.C., Nassar, G. Bouma, J.A. (accepted). Change Meat Resistance: Systematic Literature Review on Consumer Resistance Towards the Alternative Protein Transition.
- Onwezen, M. , Dwyer, L. , Verain, M. , Kremer, F. , van den Puttelaar, J. , Herceglic, N. , Dagevos, H. , Logatcheva, K. (2024). Pilot: Eiwitmonitor 2023 : Inzicht in de verhouding plantaardige en dierlijke eiwitten in vraag en aanbod: <https://edepot.wur.nl/653869>
- Read, D., & Van Leeuwen, B. (1998). Predicting hunger: The effects of appetite and delay on choice. *Organizational behavior and human decision processes*, 76(2), 189-205.
- Poelman, Dijkstra, S.c., Djojosoeparto, S.K. de Vet, E.W.M.L. Seidell, J.C. & Kamphuis, C.B.M.(2021). Monitoring van de mate van gezondheid van het aanbod en de promoties van supermarkten en out-of-home-ketens: Inzicht in de huidige stand van zaken en aanbevelingen voor het opzetten van een landelijke monitor. link
- Prochaska, J. O., & Velicer, W. F. (1997). The transtheoretical model of health behavior change. *American journal of health promotion*, 12(1), 38-48.
- Rothgerber, H. (2020). Meat-related cognitive dissonance: A conceptual framework for understanding how meat eaters reduce negative arousal from eating animals. *Appetite*, 146, 104511.
- Sheth, J. N., Newman, B. I., & Gross, B. L. (1991). Why we buy what we buy: A theory of consumption values. *Journal of business research*, 22(2), 159-170.
- Thaler, R. H., & Sunstein, C. R. (2009). *Nudge: Improving decisions about health, wealth, and happiness*. Penguin.
- Truc, A. (2022). Forty years of behavioral economics. *The European Journal of the History of Economic Thought*, 29(3), 393-437.
- Tversky, A., & Kahneman, D. (1974). Judgment under Uncertainty: Heuristics and Biases: Biases in judgments reveal some heuristics of thinking under uncertainty. *science*, 185(4157), 1124-1131.
- van Gent, M. J., Onwezen, M. C., Renes, R. J., & Handgraaf, M. (2024). BETWIXT AND BETWEEN: The role of ambivalence in environmental behaviours: a systematic review. *Journal of Environmental Psychology*, 102311.
- Van der Meer, M., Schruff-Lim, E. M., Fischer, A. R. H., & Onwezen, M. C.(submitted). "Planting" meat substitutes in the meat shelf: Two natural field experiments to explore the effect of placing meat substitutes next to meat.
- Verain, M. C., Dagevos, H., & Jaspers, P. (2022). Flexitarianism in the Netherlands in the 2010 decade: Shifts, consumer segments and motives. *Food Quality and Preference*, 96, 104445.
- Vermeir, I., & Verbeke, W. (2005). Sustainable food consumption, involvement, certainty and values: an application of the theory of planned behaviour (No. 05/352). Ghent University, Faculty of Economics and Business Administration.
- Willett, W., Rockström, J., Loken, B., Springmann, M., Lang, T., Vermeulen, S., Garnett, T., Tilman, D., DeClerck, F., Wood, A., & Murray, C. J. (2019). Food in the Anthropocene: The EAT–Lancet Commission on healthy diets from sustainable food systems. *The Lancet*, 393(10170), 447-492.
- White, K., Habib, R., & Hardisty, D. J. (2019). How to SHIFT consumer behaviours to be more sustainable: A literature review and guiding framework. *Journal of Marketing*, 83(3), 22-49.

