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The Intention-Behaviour Gap and the Nature of Intentions

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1. Introduction

With the Theory of Reasoned Actions, developed by Martin Fishbein and Icek Ajzen in 1967, intentions were introduced as a critical stage between attitude and behaviour.¹ Since then, intentions have become a widely discussed topic across various disciplines, including behavioural economics. In recent years, the intention-behaviour gap has gained significant attention across various fields.² This phenomenon describes the failure to translate one's intention into an actual behaviour. As an interdisciplinary topic, the intention-behaviour gap has been empirically investigated in numerous studies with outcomes relevant to economic issues like consumer behaviour, nudging and paternalism, and public policies.³ The intention-behaviour gap relates to a philosophical debate called the *weakness of will*, wherein a weak-willed person is described as someone acting against their better judgement.⁴

Most of the studies on the intention-behaviour gap I will analyse have found a significant gap between participants' intentions and their actual behaviour. However, almost none of these studies have theoretically discussed the concept of intentions.⁵ Even those few who attempted definitions have been vague and inconsistent. Some describe intentions as specifying a desired endpoint⁶, while others define them as the "willingness and effort to perform an action"⁷. Most papers lack a basic definition, let alone a thorough discussion of intentions.⁸ In their review of studies on the intention-behaviour gap, Hassan et al. note a general lack of understanding of how intentions convert into actions.⁹ I argue that this is a significant methodological flaw and question the empirical evidence of the intention-behaviour gap based on the lack of definition and discussion of intention.

To address this, I approach this matter from a philosophical, action-theoretical perspective. I propose a definition of intentions informed by philosophical action theory.

¹ See Ajzen, 2012.

² See Araç / Çabuk, 2023.; See Enste / Altenhöner, 2021.; See Bläse et al., 2023.; See Gibson et al., 2021.; See Colombo et al., 2023.; See Duong, 2023.; See Sajid et al., 2023.; See He et al., 2023.; See Ng, 2023.; See Oliver et al., 2023.; See Qi et al., 2020.; See Shehawy, 2023.; See ElHaffar et al., 2020.

³ See Araç / Çabuk, 2023.; See Enste / Altenhöner, 2021.; See Bläse et al., 2023.; See Gibson et al., 2021.; See Colombo et al., 2023.; See Duong, 2023.; See Sajid et al., 2023.; See He et al., 2023.; See Ng, 2023.; See Oliver et al., 2023.; See Qi et al., 2020.; See Shehawy, 2023.; See ElHaffar et al., 2020.

⁴ See Stroud / Svirsky, 2019.

⁵ See Araç / Çabuk, 2023.; See Gleim / Lawson, 2014.; See Kennedy et al., 2009.

⁶ See Carrington et al., 2010, p. 144.

⁷ Enste / Altenhöner, 2021, p. 7.

⁸ See Araç / Çabuk, 2023.; See Gleim / Lawson, 2014.; See Kennedy et al., 2009.

⁹ See Hassan et al., 2016, p. 232.

Specifically, I draw on Michael Bratman's extensive theory of intentions. As planning agents, our future-directed intentions are part of bigger plans. They hold a certain stability, are coherent, consistent, conduct-controlling and important elements in practical reasoning.¹⁰ By applying Bratman's theory, I not only aim to offer a clearer, more robust definition of intentions but also to address and resolve the methodological flaws in the existing literature. A deeper understanding of the nature of intentions and their role in our everyday planning and practical reasoning will provide a necessary foundation for ensuring reliable outcomes of future research on the intention-behaviour gap.

This thesis is structured as follows. I will begin by giving an overview of the intention-behaviour gap in the (behavioural) economic literature, its origins and relevance. I will follow with a brief explanation of my own literature research and the papers I have chosen to analyse. The next chapter aims to provide an in-depth analysis and critique of the papers chosen. I will argue and demonstrate that the papers analysed show significant limitations. These are the lack of clear definitions of intentions, the imprecise methods to capture and measure intentions, and the poor understanding of the unique role of intentions. I will conclude that a deeper understanding of the nature of intentions is necessary to resolve all of these limitations. The subsequent chapter aims to provide insights into the nature of intentions. I will begin with general insights into action theory in philosophy to contextualise my chosen focus on Michael Bratman's theory of plans and intentions. I will further illustrate Bratman's theory of plans and intentions and explain their most important characteristics. This is the foundation for addressing the theoretical limitations in the intention-behaviour gap literature. In the last section of this thesis, I will apply the theoretical insights from Bratman to the practical limitations in the intention-behaviour gap literature, namely the imprecise methods of measuring intentions. Specifically, I will offer ways to measure intentions based on the knowledge of intentions and their unique role gained from Bratman. This is a first step to address and solve the crucial flaws in the intention-behaviour gap literature.

¹⁰ See Bratman, 1987.

2. The Intention-Behaviour Gap

In recent years, the intention-behaviour gap has gained significant attention. This phenomenon describes the failure to translate one's intention into an actual behaviour. The intention-behaviour gap is a topic of discussion in various fields of research. While it primarily stems from psychology, it is also highly relevant to sociology and (behavioural) economics. Numerous studies have empirically investigated it, with outcomes relevant to economic issues like consumer behaviour, nudging and paternalism, and public policies.¹¹

The aim of this chapter is to introduce current empirical literature on the intention-behaviour gap. I will begin with a brief introduction to the Theory of Planned Behaviour, developed by Icek Ajzen. This theory is frequently used as a theoretical framework in empirical studies on the intention-behaviour gap. Following this, I will give an overview of my own research and the papers I will analyse.

2.1 Where Does It Come From and Where Is It Relevant?

With the Theory of Reasoned Actions (TRA), developed by Martin Fishbein and Icek Ajzen in 1967, intentions were introduced as a critical stage between the attitude towards the behaviour and the behaviour itself.¹² Predominantly in social psychology, the common belief was that attitudes directly influence and dictate behaviour. With that, intentions were not clearly distinguished from attitudes and behaviour. This implied that behaviour can be predicted based on an individual's attitudes. However, some findings suggested that attitudes might be a rather weak indicator of subsequent behaviour.¹³ Fishbein and Ajzen, therefore, introduced intentions as a mediator between attitudes and behaviour. According to the TRA, intentions are influenced by attitudes towards the behaviour and subjective norms.¹⁴

Later, Ajzen extended the TRA by proposing the Theory of Planned Behaviour (TPB). This extension incorporates a measure of perceived behavioural control (PBC) to better

¹¹ See Araç / Çabuk, 2023.; See Enste / Altenhöner, 2021.; See Bläse et al., 2023.; See Gibson et al., 2021.; See Colombo et al., 2023.; See Duong, 2023.; See Sajid et al., 2023.; See He et al., 2023.; See Ng, 2023.; See Oliver et al., 2023.; See Qi et al., 2020.; See Shehawy, 2023.; See ElHaffar et al., 2020.

¹² See Ajzen, 2012.

¹³ See Ajzen, 2012, p. 13-14.

¹⁴ See Hassan et al., 2016, p. 220.

account for an individual's behaviour. According to the TPB, perceived behavioural control influences the intentions themselves and the translation of the intention into the behaviour. Like attitudes and subjective norms, perceived behavioural control is based on the individual's beliefs.¹⁵

The TRA and the TPB have been extensively applied in the literature on the intention-behaviour gap. Researchers have used these theories as a starting point to further identify and understand the proposed gaps between intentions and behaviour.¹⁶ Although I will primarily discuss the intention-behaviour gap, it is important to acknowledge that more than one gap is identified in the (ethical) consumer behaviour models. The general idea is that “(1) *beliefs* determine *attitudes*, (2) *attitudes* lead to *intentions* and (3) *intentions* inform *behaviour*. In addition, *social norms* and *behavioural control* moderate intentions and behaviour.”¹⁷ Therefore, there can be a gap not only between intentions and behaviour but also between attitudes and intentions. While there is a body of literature on the gap between the (ethical) consumer's attitude and her intentions, I will focus solely on the gap between intentions and behaviour. This is because the literature on the intention-behaviour gap is more dominant and, in my eyes, the most relevant out of the two for further implications in economics and policy-making.¹⁸

2.2 Overview of My Literature Research

For my literature analysis, I selected papers that aim to better understand the intention-behaviour gap. Specifically, these papers focus on identifying gaps and finding potential factors that hinder the translation of intentions into behaviour. I concentrate solely on papers that analyse the intention-behaviour gap within the context of ethical consumerism. In this field of research, the intention-behaviour gap is often referred to as the *green gap*. With one exception, all papers included in my analysis are empirical studies. In all these papers, intentions are a foundational concept of their work.

¹⁵ See Ajzen, 2012, p. 17-19.

¹⁶ See Carrington et al., 2010, p. 139.

¹⁷ Carrington et al., 2010, p. 142.

¹⁸ See Carrington et al., 2010, p. 142.

3. Analysis of the Literature

In this chapter, I will analyse the selected papers. I will outline each paper separately, explain its aims and methodology, present the results and critically evaluate it.

3.1 Kennedy / Beckley / McFarlane / Nadeau

Kennedy et al.'s 2009 paper "Why We Don't 'Walk the Talk': Understanding the Environmental Values / Behaviour Gap in Canada"¹⁹ aims to identify whether individuals are aware of their environmental value-behaviour gap and how they explain it. Contrary to other studies, Kennedy et al. focus on self-awareness of the gap rather than external identification, thus emphasising participants' perceptions over actual behaviour.²⁰

Their study's data came from a questionnaire sent out in Canada in 2004, which resulted in 1,664 usable responses and a response rate of 34.7%.²¹ The questionnaire's key question was, "To what extent is your impact on the environment a priority in your life?"²² with three answer choices. These were: "(1) My impact on the environment is a very low priority for me; (2) I always consider what my impact is when I act, but often time and resources prevent me from doing what I feel is best, or (3) I have oriented my entire lifestyle around my concern for the environment."²³ Kennedy et al. identified the second option as indicative of an intention-behaviour gap. At this point in the paper, they do not refer to this as an intention-behaviour gap as they do not talk about intentions, but rather about 'what one would like to do'.²⁴ However, at a later point, they refer to those who answered the question with answer two, as people "who report being prevented from acting on their best intentions".²⁵ Another passage which clearly shows they talk about intentions is when they discuss their results from the consecutive research about hurdles: "While most respondents have few individual constraints to ESB [environmentally-supportive behaviour], 72.3% of Canadians recognize a gap between their intentions and their actions."²⁶

¹⁹ Kennedy et al., 2009.

²⁰ See Kennedy et al., 2009, p. 152-153.

²¹ See Kennedy et al., 2009, p. 155.

²² Kennedy et al., 2009, p. 155.

²³ Kennedy et al., 2009, p. 155.

²⁴ See Kennedy et al., 2009, p. 155.

²⁵ Kennedy et al., 2009, p. 156.

²⁶ Kennedy et al., 2009, p. 157.

Kennedy et al. found that 72% of respondents chose this option, indicating a recognised gap between intentions and behaviour. They further explored hurdles hindering environmental actions, identifying lack of knowledge, time constraints, and societal factors as significant barriers. They concluded with recommendations for policy adjustments to reduce the gap.²⁷

Kennedy et al.'s study is insightful in highlighting self-perceived gaps between intentions and behaviour. However, their work has notable limitations.

Firstly, despite their main aim to explore the intention-behaviour gap, they did not define intentions explicitly. While they discussed the concepts of value, beliefs, and knowledge and how they relate to (ethical) behaviour²⁸, the absence of a definition of intentions weakens their methodology.

Moreover, the second answer option in their questionnaire is too vague to effectively capture an intention-behaviour gap. The phrases 'Considering an impact' and 'feeling what is best' do not indicate intentions. Participants might be more inclined to affirm a consideration rather than an actual intention. Synonyms used for the study's objective – namely, intentions – must be chosen cautiously. In this case, rephrasing the question as 'I intend to act more sustainably, however, often time and resources prevent me from acting on my intentions' might have been more appropriate. When participants are asked to affirm or deny a question about intentions, it can be beneficial to define the term beforehand. This clarification could help prevent misunderstandings of the study's objective by both researcher and participants, as well as reduce the likelihood of misinterpretations by participants.

Lastly, while investigating participants' perceptions of their intention-behaviour gap is interesting, the potential for social desirability bias must be acknowledged. Respondents might have overestimated their environmental considerations to conform to social standards.

²⁷ See Kenedy et al., 2009, p. 157-159.

²⁸ See Kenedy et al., 2009, p. 153-154.

In conclusion, the lack of a clear definition of intentions and the vague phrasing of the questionnaire are significant methodological flaws that might have negatively impacted the study's results.

3.2 Carrington / Neville / Whitwell

Carrington et al.'s 2010 paper "Why Ethical Consumers Don't Walk Their Talk: Towards a Framework for Understanding the Gap Between the Ethical Purchase Intentions and Actual Buying Behaviour of Ethically Minded Consumers"²⁹ aims to construct a model integrating three insights from different fields. These insights are implementation intentions, actual behavioural control (ABC), and situational context (SC). They argue that the intention-behaviour gap results from various constraints preventing the translation of intentions into behaviour.³⁰

They define intentions as specifying a desired endpoint and signalling a commitment to achieve the desired outcome.³¹ Intentions incorporate multiple influences, such as attitudes, social norms, and perceived behavioural control (PBC). Before forming an intention, individuals weigh multiple and sometimes conflicting beliefs. The resulting intention reflects these different influential factors and beliefs. However, salient influencing factors may hinder or block an individual from translating their intention into behaviour.³²

Along with the discussion of intentions, Carrington et al. introduce the concept of implementation intentions, widely used in action / social psychology literature. Implementation intentions act as mediators between intentions and behaviour, serving as an if / then plan that guides individuals from intention to actual behaviour. These plans outline when, where and how the intentions will be realised as actual behaviour. Implementation intentions help individuals mentally prepare and protect their intentions from unwanted, unexpected and conflicting influences. Carrington et al. hypothesise that

²⁹ Carrington et al., 2010.

³⁰ See Carrington et al., 2010, p. 140.

³¹ See Carrington et al., 2010, p. 144.

³² See Carrington et al., 2010, p. 149.

forming implementation intentions will positively influence the intention-behaviour gap.³³

They identify two major influences on the translation of an intention into a behaviour: situational context (SC) and actual behavioural control (ABC). Within the theory of planned behaviour, perceived behavioural control (PBC) is used, among other influences, to explain the formation of purchasing intentions. This refers to “an individual’s perception of their capability to perform a given behaviour – i.e. the extent to which the performance of this behaviour is perceived to be under their (external) control and within their (internal) abilities.”³⁴ While PBC points at the imagined scenario of the anticipated situation, ABC refers to the objective and actual control the consumer has to carry out their behaviour in the anticipated situation. Carrington et al. argue that the ABC, not the PBC, influences the translation of purchasing intention into actual behaviour. The SC refers to the environment in which the consumer exists when shopping. For instance, the price of ethical products has changed, or the consumer might be in a rush as he has a child with him.³⁵

Carrington et al. argue that ABC can positively moderate the intention-behaviour gap, while situational context can either positively or negatively moderate it. They describe the process of adjusting one’s intended behaviour to fit the situational context and ABC as follows: “When the consumer is confronted with an ABC and situational environment (SC) different to that perceived, their previously singular intention unravels and the multiple influences [e.g. attitudes, social norms, PBC, etc.] reform into a singular behavioural decision to fit the ABC and SC.”³⁶ This process explains how an intention-behaviour gap can occur.

Generally, they argue that there are three possible instances that can potentially influence or hinder the translation of an intention into behaviour. These are flawed implementation intentions (e.g. the consumer shops on auto-pilot or forgets her (implementation) intention), situations, where the actual behavioural control does not match with the anticipated perceived behavioural control, or the situational context, is not fruitful for the ethical consumer decisions.³⁷

³³ See Carrington et al., 2010, p. 145.

³⁴ Carrington et al., 2010, p. 145.

³⁵ See Carrington et al., 2010, p. 145-148.

³⁶ Carrington et al., 2010, p. 149.

³⁷ See Carrington et al., 2010, p. 149-150.

Implementation intentions are typically measured by surveys and observations in laboratory settings. Originating from social psychology, this construct is often observed at two points in time: when participants form their implementation intentions and when they achieve or do not achieve their goals. Most studies limit their methodologies to observing whether participants have implementation intentions (yes / no). Some extend these measures by assessing intention strength, implementation intention strength, and the existence and completeness of them. Despite these extensions, limitations remain, such as the majority of studies relying on participants' interpretation of their (implementation) intentions and plans and the lack of studies conducted outside laboratory contexts.³⁸

To measure ABC, Carrington et al. suggest using belief-based measures from pilot studies. For example, to measure control belief strength, a question might be, "My family commitments are currently placing high demands on my time (strongly disagree – strongly agree)"³⁹ To measure control belief power after a store visit, a question might be, "My family placing high time demands on me made it (much more difficult – much easier) to purchase products with ethical credentials on my last visit to the store."⁴⁰

SC is commonly measured through experimental, semi-structured interview, and survey methods, focusing on physical surroundings (e.g. general store interior, in-store information, price displays), social surroundings (e.g. interaction between staff and customers, crowding in-store), temporal perspective (e.g. time of day, time constraints), task definition (e.g. for whom the shopper is buying), antecedent states (e.g. momentary moods and conditions).⁴¹

Carrington et al. propose a conceptual model integrating mixed-methods research strategies, including qualitative, pilot, and field studies. A mixed-methods approach can facilitate a more robust theory and prevent biases, such as social desirability bias. The qualitative study aims to specify, understand, and refine the concepts of implementation intentions, ABC, and situational context. This qualitative work is crucial for understanding the mechanisms and relationships among these concepts. Pilot studies can

³⁸ See Carrington et al., 2010, p. 150-151.

³⁹ Carrington et al., 2010, p. 151.

⁴⁰ Carrington et al., 2010, p. 151.

⁴¹ See Carrington et al., 2010, p. 151-152.

further enhance the operationalisation of the conceptual model. To empirically test the model, in-store field experiments and questionnaires are necessary.⁴²

In conclusion, Carrington et al. argue that a mixed-methods approach is essential for researching the intention-behaviour gap in ethical consumerism contexts, given the challenges of integrating cognitive and contextual concepts within a single model. However, their model remains conceptual, as they have not yet empirically tested it.⁴³

Carrington et al. offer valuable insights into the integration of cognitive and conceptual factors to explain the intention-behaviour gap. Proposing a mixed-method approach to researching the intention-behaviour gap is a significant contribution to the research area. However, a notable limitation to the strength of their argument is that their model remained theoretical. Without empirical testing, it is difficult to assess how effective or practical their proposed model might be in practice. Empirical validation of their conceptual model is therefore essential to evaluate and strengthen their arguments.

In their theoretical discussion of intentions and the intention-behaviour gap, Carrington et al. lay an important foundation for further research. However, their definition of intentions is somewhat vague. In their definition, intentions “specify a desired end point and signal commitment to achieving this outcome”⁴⁴. Yet, this characterisation leaves significant room for interpretation, as it does not specify the level of detail required for the endpoint or the degree of commitment applied. Although they provide a definition, it still lacks the precision necessary to fully grasp the complexity and significance of intentions.

3.3 Gleim / Lawson

Gleim and Lawson’s 2014 paper “Spanning the gap: an examination of the factors leading to the green gap”⁴⁵ aims to understand the consumers’ motives that support or hinder

⁴² See Carrington et al., 2010, p. 152-153.

⁴³ See Carrington et al., 2010, p. 153-155.

⁴⁴ Carrington et al., 2010, p. 144.

⁴⁵ Gleim / Lawson, 2014.

environmentally friendly consumption.⁴⁶ They begin their paper with several facts about environmentally conscious consumers. According to polls, about 83% of individuals are concerned about the environment and have formed intentions to act more environmentally friendly. However, only 16% actually translate their concerns and intentions into their behaviour. It is important to note that while they cite various papers, the results of these polls were not specified in detail.⁴⁷

As a framework of their research, Gleim and Lawson utilise the value-belief-norm (VBN) theory of environmentalism. This theory integrates various factors, including personal capabilities, habits, routines, contextual factors, and attitudes. Time and effort significantly influence our consumption patterns. While price is an obvious factor in green consumption, time is often overlooked. The effort required to evaluate new and greener products, conduct research, and change existing habits also greatly influences green consumption. Social norms and the behaviour of those around us further impact these decisions. Consumers' attitudes towards green products are crucial for understanding green behaviour, and a lack of trust in or perceived authenticity of green products can significantly hinder green behaviour.⁴⁸

Gleim and Lawson performed two studies. The first was conducted "to ensure that the theoretical framework adequately discusses, and realistically addresses, the obstacles encountered by actual consumers."⁴⁹ Those findings were used to inform the subsequent study.⁵⁰

For their first study, they collected data through an online survey administered in the Midwest and Northeastern USA, resulting in 99 participants. They asked participants to think about "the last time they went shopping with the intention of purchasing a green product (subjects were given a definition of green prior to starting), but instead chose to purchase a non-green product."⁵¹ Participants were then asked to explain their reasons for not purchasing the green product they initially sought and to specify the product they intended to purchase versus what they ultimately bought. The results showed that the

⁴⁶ See Gleim / Lawson, 2014, p. 504.

⁴⁷ See Gleim / Lawson, 2014, p. 503.

⁴⁸ See Gleim / Lawson, 2014, p. 504-505.

⁴⁹ Gleim / Lawson, 2014, p. 505.

⁵⁰ See Gleim / Lawson, 2014, p. 505.

⁵¹ Gleim / Lawson, 2014, p. 505.

main reasons for not purchasing the green product were price, quality, convenience, and brand loyalty.⁵²

The second study aimed to identify variables that influence the formation and intensity of intentions. Initially, they had 148 participants, but after removing 17 questionnaires, they were left with usable sample of 131.⁵³ They first identified three product categories mentioned by participants in the first study: convenience goods, shopping goods, and durable goods. They assigned three green products to each category, matching or closely resembling those mentioned in the first study. The products included Seventh Generation paper towels, Clorox Green Works detergent, Method cleaner, eco-friendly shelves, bamboo sunglasses, bamboo phone case, Toyota Prius, Greenworks electric mower, and an LG high-efficiency washing machine. Each participant was assigned one of the nine products and was asked to complete a questionnaire. While the questionnaire itself was not included in their paper, they stated that it measured various hindering factors, including price sensitivity, social norms, willingness to comply with social norms, value, quality, perceived consumer effectiveness, advertising trust, availability, inertia, personal norms, organisational trust, expertise, and purchase intentions.⁵⁴

Gleim and Lawson performed a two-step cluster analysis. The first step involved hierarchical cluster analysis, the second was non-hierarchical, both aimed at identifying the number of clusters. They clustered respondents based on the independent variables identified in the conceptual framework and labelled them according to the varying levels of purchasing intentions exhibited towards the green product they were presented. They identified three groups: 'flounders', 'straddlers', and 'spanners'.⁵⁵

The 'flounders', 18.8% of the participants, had the lowest purchase intentions toward buying the green product they were assigned. The price sensitivity was not significantly different from that in the other two groups. However, the flounders had high inertia, lack of trust, poor perceptions of green products, a perceived hassle of buying them, and a lack of perceived impact of their purchase choice.⁵⁶

⁵² See Gleim / Lawson, 2014, p. 505.

⁵³ See Gleim / Lawson, 2014, p. 507.

⁵⁴ See Gleim / Lawson, 2014, p. 507.

⁵⁵ See Gleim / Lawson, 2014, p. 508-510.

⁵⁶ See Gleim / Lawson, 2014, p. 508.

The ‘straddlers’, composed of 42% of the participants, had moderate purchase intentions. Nearly all variables fell between the flounders and the spanners.⁵⁷

The ‘spanners’, which were 38.2% of the participants, had the highest purchase intentions. They scored significantly higher on all other variables except for price sensitivity and inertia, which were not significantly different from the other two groups.⁵⁸

The results indicate that price did not significantly influence the different intensities of purchase intentions. Instead, habits and routines emerged as the most important influences. Convenience goods, which are frequently purchased, showed the lowest levels of purchase intentions in one of the groups, supporting the idea that established habits play a crucial role.⁵⁹

Gleim and Lawson acknowledge that the primary limitation of their research is the reliance on self-reported data, which can be affected by social desirability bias. This method may lead to discrepancies between stated and actual intentions. Another limitation is the potential variability in results depending on the clustering algorithm used for analysis. The authors used the VBN theory for their framework, but incorporating other theories, such as the TPB or the Norm Activation Model, could provide additional insights.⁶⁰

Overall, Gleim and Lawson’s paper provides interesting insights into consumers’ purchasing motives regarding green products. However, the study has significant limitations that impact the reliability and validity of its findings.

A critical issue is the lack of clear definitions of intentions in both studies. In the first study, which is entirely dependent on participants’ self-reported data, a clear and precise definition is crucial for ensuring reliable and comparable results. Without it, participants may interpret the term differently or oversimplify it, resulting in a wide range of responses that cannot be directly compared. The reliance on self-reported data, combined with the absence of a clear and robust definition by the researchers, also increases the risk of social desirability bias, as participants are free to interpret and might respond in ways they

⁵⁷ See Gleim / Lawson, 2014, p. 510.

⁵⁸ See Gleim / Lawson, 2014, p. 510.

⁵⁹ See Gleim / Lawson, 2014, p. 510-511.

⁶⁰ See Gleim / Lawson, 2014, p. 511.

perceive as more socially acceptable. This variability in interpretation, along with the potential bias, weakens the reliability of the findings.

The second study, which aims to identify variables influencing the formation and intensity of intentions, is similarly affected. Without a clear understanding of what intentions specifically refer to, it becomes difficult to accurately measure and analyse the factors influencing them. This omission weakens the overall validity of the study, as the influences on intentions are difficult to measure when the object of measurement itself is not clearly defined.

3.4 Nguyen / Nguyen / Hoang

The paper “Green consumption: Closing the intention-behavior gap”⁶¹ contributes to the literature on the intention-behaviour gap in green consumption contexts. They define green consumption as “purchasing and consumption behaviors by an individual which are related to environmental and resource problems and are motivated by not only a desire to satisfy an individual’s needs but also a concern for the welfare of society in general.”⁶² The primary aim of their paper is to theoretically establish two moderators – green product availability and perceived consumer effectiveness – that facilitate the translation of intentions into behaviour. These moderators are then tested in an empirical study.⁶³

For their study, data was collected through mall-intercept surveys in two major cities in Vietnam (Hanoi and Ho Chi Minh City) during December 2016, involving more than 400 participants. They adopted and modified measures from previous studies and provided their definition of green consumption to participants to avoid misunderstandings.⁶⁴

The study focused on eight subjects: attitude towards the environment, attitude towards green consumption, subjective norm of green consumption, green products price sensitivity, the (un)availability of green products, perceived consumer effectiveness, green consumption intention, and green consumption behaviour. Nguyen et al. evaluated

⁶¹ Nguyen et al., 2017.

⁶² Nguyen et al., 2017, p. 119.

⁶³ See Nguyen et al., 2017, p. 118.

⁶⁴ See Nguyen et al., 2017, p. 123.

the reliability and validity of these measures using exploratory factor analysis and Cronbach's alpha coefficients.⁶⁵

The results show that both hypothesised mediators were supported. Specifically, the availability of green products and perceived consumer effectiveness positively moderated the relationship between green consumption intentions and subsequent behaviour. Additionally, variables such as attitude toward green consumption, perceived consumer effectiveness, and subjective norms of green consumption also positively influenced green consumption intentions.⁶⁶

Similarly to the previous papers, this study does not adequately discuss or define the concept of intentions. While the researchers provided participants with a definition of *green consumption* to avoid misunderstandings⁶⁷, they did not define what they meant by *intentions*. This may have led to varied interpretations among the participants, compromising the accuracy of the study's findings.

The issue is evident in the indicators used for measuring green consumption intentions. Statements such as "I am willing to consider switching to other brands for ecological reasons. I am willing to pay more for a product which is healthy or helps protect the environment. I will consider buying green products because they are less polluting"⁶⁸ reflect willingness or consideration rather than actual intentions. Being willing to do something or considering an action is not synonymous with having a clear intention. Additionally, participants may be more inclined to affirm willingness rather than articulate a concrete plan or intention, as this requires less effort. Furthermore, the phrasing of the study's questions, combined with the affirm-or-deny format, may encourage socially desirable responses. Consequently, the study fails to measure genuine intentions accurately.

Further, the measurement of behaviour is flawed. Rather than directly assessing the participants' actions, they relied on self-reported data. Statements as indicators for green consumption behaviour were "I prefer purchasing safe or traceable foods. I prefer purchasing green label products. I rarely use plastic bag to carry food. Electric appliances

⁶⁵ See Nguyen et al., 2017, p. 123-124.

⁶⁶ See Nguyen et al., 2017, p. 124.

⁶⁷ See Nguyen et al., 2017, p. 119.

⁶⁸ Nguyen et al., 2017, p. 124.

in my family are energy saving. I introduce the green products I use to my friends and relatives.”⁶⁹ These statements mostly measure preferences rather than actual consumer behaviour.

While the study’s measures and analysis might be methodologically sound, the flawed indicators for both intentions and behaviour undermine the overall validity of the findings. Therefore, I argue that this study does not accurately represent the participants’ actual intentions and behaviour regarding green consumption.

3.5 Araç / Çabuk

Araç and Çabuk’s 2023 paper “How Do Ethically Minded Consumers Explain Intention-Behavior Gap? Barriers to Ethical Purchasing in Turkey”⁷⁰ aims to identify barriers to ethical behaviour through a mixed-method approach to minimise the social desirability effect. The identified barriers include search difficulty and availability, price, scepticism, and functional expectations.⁷¹

Araç and Çabuk note two main explanations in the literature for the existence of an attitude-intention-behaviour gap. First, the participants’ stated intentions and attitudes might be exaggerated due to the social desirability bias. The desire to conform to social conventions might influence participants’ statements and result in misleading conclusions on the intention-behaviour gap. Second, while some individuals may genuinely have ethical intentions, various constraints and competing demands hinder the translation of these intentions into behaviour.⁷²

To address these issues, the study aimed to minimise social desirability bias and gain unbiased insights into barriers to ethical behaviour. Participants were members of non-governmental organisations (NGOs) and voluntary groups concerned with human rights, animal welfare, and environmental issues, assumed to have ethical consumption intentions. Screening questions supported this assumption, though details of these were

⁶⁹ Nguyen et al., 2017, p. 124.

⁷⁰ Araç / Çabuk, 2023.

⁷¹ See Araç / Çabuk, 2023, p. 1339-1341.

⁷² See Araç / Çabuk, 2023, p. 1342.

not included in the paper. The qualitative research involved semi-structured interviews with 12 participants, while the quantitative research involved 349 valid questionnaires.⁷³

For the qualitative research, semi-structured interviews averaging 48 minutes were conducted. Questions covered “advantages / disadvantages of ethical purchasing, supporting / disapproving groups, facilitating / impeding factors, and expectations regarding ethical products”⁷⁴.

The quantitative survey consisted of three groups of questions: Importance of ethical factors in apparel purchasing (using a 7-point scale), barriers to ethical behaviour (using a 15-item Purchase Barrier Scale), and demographic classification.⁷⁵

The qualitative research revealed that inner peace was the main advantage of ethical purchasing, while high price, scepticism, limited availability, and product range were significant disadvantages. Participants found NGO communities supportive of ethical consumption but had mixed views about support from children and social circles. Key facilitating factors included increasing availability, reducing prices, and easier access to information about ethical products. In order to purchase an ethical product, participants stated that the characteristics of the products had to be ethically made (regarding the environment, human health and fairness and locally made), functional, high quality, longer lasting, matching their style and having enough options to choose from.⁷⁶

The quantitative research indicated that the most important criteria for purchasing apparel were necessity, product quality, and non-violation of animal welfare. The least important criteria were being fashionable, approval from others, and brand recognition. The most significant barriers to ethical purchasing were search difficulty and availability, followed by price and scepticism.⁷⁷

While the study captured participants’ attitudes towards ethical consumption, it has notable limitations. The assumption that NGO members inherently have ethical consumption intentions is not adequately substantiated. This weakens the study’s

⁷³ See Araç / Çabuk, 2023, p. 1343.

⁷⁴ Araç / Çabuk, 2023, p. 1343.

⁷⁵ See Araç / Çabuk, 2023, p. 1343-1344.

⁷⁶ See Araç / Çabuk, 2023, p. 1346.

⁷⁷ See Araç / Çabuk, 2023, p. 1348-1349.

conclusion about the intention-behaviour gap, as intentions were not directly measured but inferred.

Further, the screening questions used to support the assumption that participants had ethical consumption intentions were not included in the paper, making it difficult to verify the validity of the premise. The foundation on which the conclusions about barriers is based is somewhat weak.

4. Criticism and Conclusion of the Literature

The literature review revealed significant limitations in all of the analysed papers. In this chapter, I will summarise and critically evaluate the key findings, focusing on three main issues. These are the lack of definition of intention, the flawed measurement of intention, and the lack of discussion of the unique role of intentions in our actions.

4.1. The Absence of a Definition

The most significant flaw identified is the critical lack of definitions. Among the reviewed papers, Carrington et al.'s paper is the only one that attempts to define intentions.⁷⁸ According to their definition, intentions “specify a desired end point and signal a commitment to achieving this outcome.”⁷⁹ While this is a good start, this definition remains vague and fails to distinguish intentions from ordinary commitments, desires, and plans. Moreover, the paper does not provide specific examples to illustrate the definition, and leaving the nature of the commitment tied to intentions unclear. Despite offering a definition, the paper lacks depth and clarity in explaining the unique role of intentions. None of the other papers analysed provide a definition of intentions at all.⁸⁰

This omission represents a critical limitation not only for the individual papers but also for the literature as a whole. A clear and precise definition of what is sought to be measured is necessary for several reasons. The absence of a definition for study participants can likely lead to misinterpretations among them. They might mistake their desires and wishes as intentions, as the term might be used more loosely in everyday language than when adequately distinguished from other attitudes. This might result in unprecise and incomparable study outcomes. Different interpretations of intentions among participants complicate researchers' ability to accurately interpret results and draw valid conclusions. Furthermore, the researchers' own lack of clear definition hinders their ability to conduct rigorous research and interpret study findings coherently. The absence of a definition is detrimental not only to the research within individual studies but also to the comparability of different research outcomes. Without explicitly defined intentions, it

⁷⁸ See Carrington et al., 2010, p. 144.

⁷⁹ Carrington et al., 2010, p. 144.

⁸⁰ See Araç / Çabuk, 2023.; See Gleim / Lawson, 2014.; See Kennedy et al., 2009.

cannot be assumed that the studies are measuring the same or even a similar concept, ultimately leading to incomparability across different studies.

4.2 Precisely Measuring Intentions

The absence of a clear definition of intentions is not only detrimental for participants and interpretations of the research outcomes but is also negatively impacts the measurement of intentions in the studies. All four papers that performed empirical studies failed to measure intentions precisely.⁸¹

In Kennedy et al.'s study, intentions were identified by one of three possible answers.⁸² The answer that purportedly indicates the self-awareness of an intention-behaviour gap, and therefore an intention, was "I always consider what my impact is when I act, but often time and resources prevent me from doing what I feel is best"⁸³. This question does not involve the term *intention* at all. Further, the authors infer an intention in the affirmation of participants to consider an impact.⁸⁴ Considering something and intending something, as we use the terms in everyday language without the awareness of the full meanings, nevertheless, is associated with a different level of commitment. The vague possible answer does not measure intentions but rather an awareness and consideration of one's actions.

Gleim and Lawson asked their participants to recall "the last time they went shopping with the intention of purchasing a green product (subjects were given a definition of green prior to starting), but instead chose to purchase a non-green product."⁸⁵ While they defined green products for their participants, they did not define what they meant by having an intention.⁸⁶ This lack of clarity leaves room for varied interpretations of intentions and commitment levels, leading to unreliable results.

⁸¹ See Araç / Çabuk, 2023.; See Gleim / Lawson, 2014.; See Kennedy et al., 2009.; Nguyen et al., 2017.

⁸² See Kennedy et al., 2009, p. 155.

⁸³ Kennedy et al., 2009, p. 155.

⁸⁴ See Kennedy et al., 2009, p. 156-157.

⁸⁵ Gleim / Lawson, 2014, p. 505.

⁸⁶ See Gleim / Lawson, 2014, p. 505.

Nguyen et al. identified participants' statements such as "I am willing to pay more for a product which is healthy or helps protect the environment."⁸⁷, and "I will consider buying green products because they are less polluting"⁸⁸ as indicators of intentions to buy green products. These statements vary significantly in their level of planning and commitment. Importantly, none of these statements explicitly include intentions. Inferring intentions from statements about willingness and considerations, especially without prior definition, is speculative and unreliable.

Araç and Çabuk simply assumed green intentions in their participants based on their membership in relevant NGOs. This assumption is supported by screening questions which are not included in the paper, making their evaluation impossible.⁸⁹ Assuming intentions is a weak foundation for their analysis.

Measuring intentions is challenging, particularly when the foundational definitions are lacking. Without a clear definition, it is difficult to know what and how to measure, leading to imprecise study questions. The methods chosen to identify and measure intentions are imprecise and fail to distinguish intentions from desires, willingness, and considerations. To make valid claims about the existence of an intention-behaviour gap, it is necessary to precisely and successfully identify intentions in distinction from other pro-attitudes. One essential foundation for a successful study is a clear definition of intentions. However, this alone is insufficient. It is also crucial to formulate questions in a way that clearly differentiates potential intentions from other pro-attitudes, such as desires. While complex, this is a necessary task for achieving reliable and valuable research results.

4.3 The Lack of Understanding of the Unique Role

The lack of a detailed theory of the nature and function of intentions raises substantive methodological worries for these studies. Understanding the role of intentions in our

⁸⁷ Nguyen et al., 2017, p. 124.

⁸⁸ Nguyen et al., 2017, p. 124.

⁸⁹ See Araç / Çabuk, 2023, p. 1343.

actions is crucial for developing a robust theory of the intention-behaviour gap. Therefore, it is essential for researchers to first grasp the unique role that intentions play in guiding our actions.

Hassan et al.⁹⁰ support this claim. They reviewed existing studies that are based on the TRA and the TPB in the literature on the intention-behaviour gap.⁹¹ Hassan et al. conclude that intentions and how they translate into behaviour are generally not well understood. They urge future researchers to focus on gaining a deeper understanding of the underlying mechanisms by which intentions are translated into actions.⁹² I, too, argue that a thorough understanding of the role of intentions and how they lead to actions will ultimately enhance the development of a more comprehensive theory, leading to more precise studies and valuable results.

4.4 Conclusion on the Literature

The analysis of the papers and my criticism highlight several gaps that need to be addressed in the literature for more reliable and successful research on the intention-behaviour gap. It is necessary to better understand the nature of intentions, their functions in relation to actions, and how they differ from other pro-attitudes such as desires. This deeper understanding is essential for creating more specific and detailed studies, preventing misinterpretations among participants, and making it easier for researchers to interpret results accurately. Moreover, it will benefit the literature as a whole by enabling the development of a robust theory of intentions, which in turn will enhance the comparability of research findings across different studies.

⁹⁰ See Hassan et al., 2016.

⁹¹ See Hassan et al., 2016, p. 219.

⁹² See Hassan et al., 2016, p. 233-234.

5. Action Theory in Philosophy

Before delving into different arguments and standpoints, it is essential to first outline the fundamental questions that action theory seeks to answer. At its core, action theory is concerned with the question of what makes something an action. More specifically, the primary focus within this field is determining what characterises an intentional action as opposed to an arbitrary one. For example, why is walking from the living room to the kitchen considered an intentional action, while the 9,81 meters covered are not? Similarly, why is raising a hand to wave goodbye deemed an intentional action, while an arbitrary raising hand from a twitch is not? Or, is there perhaps no meaningful distinction at all? If there is one, what is it?⁹³

Within contemporary debates about actions, the predominant view is known as causalism. According to this theory, an action is intentional when it possesses causal connections to certain mental states. Donald Davidson pioneered this theory. In his most cited and influential work, “Actions, Reasons, and Causes”⁹⁴, from 1963, Davidson provides an account of how an action is rationalised. He argues that an action is rationalised by its reasons, but not just any reasons. Rather, they must be *primary reasons*. Davidson claims that “R is a primary reason why an agent performed an action A under the description d only if R consists of a pro attitude of the agent toward actions with a certain property, and a belief of the agent that A, under the description d, has that property.”⁹⁵ To illustrate, consider Anna, who puts on the kettle by pressing down the small plastic cap. Her pro-attitude towards her action of pressing down the plastic cap is her desire to boil some water for her tea, and her belief is that by pressing down the plastic cap, the kettle will start to heat up the water. This combination of pro-attitude and belief gives her the primary reason for the action - pressing down the plastic cap. According to Davidson, this primary reason is also the cause of her action.⁹⁶

One prominent critic of Davidson’s theory is Michael Bratman. He argues that the desire-believe model leaves no distinctive role for agents’ future-directed intentions as inputs to such reasoning.⁹⁷ Intentions, he argues, play central roles in our everyday lives as

⁹³ See Piñeros Glasscock / Tenenbaum, 2023.

⁹⁴ Davidson, 1963.

⁹⁵ Davidson, 1963, p. 687.

⁹⁶ See Davidson, 1963.

⁹⁷ See Bratman, 2003, p. 17.

planning agents, and any theory of action that overlooks this aspect remains incomplete.⁹⁸ Thus, Bratman's theory provides a comprehensive theory of plans and intentions, making it particularly relevant to the aims of this thesis. In the subsequent chapter, I will elaborate on his theory of plans and intentions.

⁹⁸ See Bratman, 1987, p. 7-8.

6. Michael Bratman on Plans and Intentions

I decided to focus on Bratman's theory for the purpose of this thesis for two reasons. First, his work is seminal in the field of intentions and plans and their importance in our practical reasoning. His work starts by pointing out the ignorance of future-directed intentions despite their importance in our lives as planning agents in current literature. Second, his theory of intentions is extensive and considers various aspects of intentions and how they relate to plans in our everyday lives.

Overall, I believe Bratman's work on intentions provides many fruitful inputs for the (economic) work on the intention-behaviour gap. In the following chapter of my thesis, I want to illustrate Bratman's theory and shed light on the work on intentions from an action theory perspective. The aim is not to critically engage with Bratman's theory and test his claims. Instead, it is to explore his theory and see how this can potentially be fruitful for the economic debate on the intention-behaviour gap.

6.1 Planning Agents and the Role of Future-Directed Intentions

Bratman claims, that we, as human beings, have the capacity to not only be agents but also be *planning* agents. What makes a planning agent is the involvement of plans. As planning agents, we have two central capacities. First, we can act purposefully, and second, we can form and execute plans.⁹⁹ These are great characteristics, however, why should we be planning agents? What can we gain from it?

We live in a complex world. We all have goals and aims for our future. However, these aims and goals are not as straightforward as we sometimes wish they were. We might have personal goals that are not compatible with each other or are not achievable at the same time. We need intrapersonal coordination, or in other words, we need to coordinate our own goals and aims so that they make sense for the future. However, because we live in a social world, we not only need to coordinate our own goals, but we also need to coordinate those with the lives of others. This means, we not only need intrapersonal, but also interpersonal coordination. Coordinating on an intrapersonal and interpersonal level

⁹⁹ See Bratman, 1987, p. 2.

is not an easy task. Especially because our time and resources for this is limited. This is where our capacity to be planning agents can help out.¹⁰⁰

Forming partial plans - and I will return to why they are partial - makes coordination easier for us. When settling on a plan, we filter future deliberation and reasoning. This is because we have already made a partial decision, so we do not have to deliberate further about all options.¹⁰¹

6.2 What Is a Plan?

As I have established in the previous chapter, plans are central to our social lives. Let us now turn to how Bratman understands these integral parts of our lives.

First, let us look at the term *plan* as it can be used differently. Having a plan, as a mental state, can refer to two different things. On the one hand, plan can merely refer to being aware of a plan in the sense of a kind of recipe, if you will. For example, I could have a plan to build a cupboard but not actually intend to build it. In this case, having a plan means I theoretically know how to build a piece of furniture, but I am not intending to put my knowledge into practice. On the other hand, however, in some cases, having a plan can also involve a certain commitment to the action. In the case of building a cupboard, this means I might have the knowledge to build it, but more importantly, I also commit and intend to build it in the (near) future. Bratman puts it as “I have a plan to *A* only if it is true of me that I plan to *A*.”¹⁰² Only these cases of plans are interesting for the purpose of this thesis. Whenever I speak of a plan, I will refer to plans as mental states with an appropriate commitment to further action.¹⁰³

With this commitment, plans give us the opportunity to coordinate at times, over time, and socially.¹⁰⁴ Because they are conduct controllers, they are an important element in practical reasoning. However, to actually be able to control our future behaviour, they need to be resistant to reconsideration and have inertia – at least to some extent.

¹⁰⁰ See Bratman, 2003, p. 18.

¹⁰¹ See Bratman, 2003, p. 19.

¹⁰² Bratman, 1987, p. 29.

¹⁰³ See Bratman, 1987, p. 28-29.

¹⁰⁴ See Bratman, 2018, p. 185-186.

Before getting to two of the most integral features of plans, let me first demarcate them from other mental states. As pointed out before, Bratman's theory fits into the functionalist tradition of philosophy of mind and actions, meaning he specifies the characteristics of, in this case, plans, by identifying how they relate to other mental states. Plan-states are not desires nor beliefs. Instead, they go beyond those. In contrast to desires and beliefs, plans are important elements of practical reasoning. They give answers to practical questions, asking what to do when faced with multiple and conflicting alternatives.¹⁰⁵ Desires and beliefs are not conduct controllers. At best, they are potential influencers on actions.¹⁰⁶ Plans share a lot of their properties with intentions. Future-directed intentions are typically elements in larger plans. We could say that plans are basically intentions writ large. Just like plans, intentions are conduct controllers.¹⁰⁷ I will come back to intentions, their characteristics and roles in the following chapter. For now, I will discuss the most important features of plans - their incompleteness and their hierarchical structure.

First, let us look at incompleteness. What is meant by the incompleteness of plans is that plans are typically partial and get filled in later as it is needed. When we first make a decision and settle on a plan, we usually only settle on a partial one. For instance, I might now decide to build a cupboard tomorrow. At this point today, I might not have decided yet which wood to use, where I will buy it, and how I will get to the store – my plan is only partial. However, as time progresses, I will figure those elements out and fill in my plan as required. A partial plan is all I need at this point in time to shape and coordinate my future actions.¹⁰⁸

The second, quite important feature of plans is their hierarchical structure, that they hold. Some parts of the plan are more specific and fixed than others. Usually, the intended end is fixed and specific, while the means of getting there are more general and may be changed. Let us come back to my plan to build a cupboard. The part of my plan to build the cupboard is hierarchically higher than my plan to go to store A. I will reconsider my choice of buying my wood in store A rather than in store B more easily than my intended

¹⁰⁵ See Bratman, 2018, p. 185-186.

¹⁰⁶ See Bratman, 2003, p. 22.

¹⁰⁷ See Bratman, 1987, p. 28.

¹⁰⁸ See Bratman, 1987, p. 29.

end, namely, building a cupboard. Building the cupboard is a fixed element of my plan while I might revise and reconsider the means of achieving it.¹⁰⁹

These partial and hierarchical plans are essential for further practical thinking and shape it in three main ways. First, these partial plans bring certain means and preliminary steps with them. These are for further practical thinking to resolve and implement. Second, these partial plans will exclude certain further options. For instance, I might have settled on building a cupboard tomorrow. Further options, that are not compatible with this choice, will not be treated as an alternative. For example, I will not consider a day trip as an option, the day I intend to build my cupboard. Third, once I am settled on building a cupboard, I typically do not reconsider or revise my plan to do it. Bratman calls this having a ‘characteristic diachronic stability’.¹¹⁰

In reality, of course, sometimes what we choose to do does not mean that we think this is the best alternative. We often choose something we know is not the best option. Still, once we settled on an option, this choice comes with a practical commitment.¹¹¹

Summing up, plans are important elements in our practical reasoning. They help shape and structure our (social) lives by being conduct controlling and filtering out options and alternatives. They are only partial when we first make a commitment to a plan. However, they get filled in as it is needed. While we might reconsider and adjust certain elements of plans because we are not able to anticipate the future correctly, some elements will be more fixed than others. Plans are central to our planning agency, and this specific agency supports and constitutes our practical capacities as human beings.¹¹²

6.3 What Is an Intention?

As I mentioned in the previous chapter, future-directed intentions are typically elements in larger plans. Now that I have characterised plans in which intentions are embedded, we can now turn to intentions, their features and their roles.

¹⁰⁹ See Bratman, 1987, p. 29-30.

¹¹⁰ See Bratman, 2018, p. 186.

¹¹¹ See Bratman, 2018, p. 186-187.

¹¹² See Bratman, 2018, p. 191.

6.3.1 Intentions versus Intentionality

First, I want to look at the term *intentions* more closely. On a very basic level, intentions are a state of mind.¹¹³ In our everyday language, we often use the term intentions to articulate targeted outcomes with some level of commitment. We further use the adverb *intentionally* to describe an action done deliberately. While we might think that intentions and acting intentionally are closely connected, Bratman aims to loosen this connection. He argues that intentional actions include intentions, however, these intentions do not have to be intentions to perform that specific action.¹¹⁴

For instance, consider Bob, who intends to run a marathon. A sign that this is an actual intention is that he will further reason from this intention. While he runs the marathon, he will wear down his running shoes. He does not intend to wear them down. However, he intentionally wears them down. By adding two more features, Bratman clarifies why this is done intentionally. First, Bob believes he will wear them down and in addition, he actively notes this while running. Second, the fact that he is wearing his shoes down has some independent significance to him – for instance, they might have been a family heirloom. With these two features, we can say that wearing down Bob's running shoes is an intentional behaviour, although he is not intending to run them down. His intention to run the marathon does not include wearing down his shoes. However, the motivational potential of his intention does.¹¹⁵

In this context, *motivational potential* refers to the special connectedness between an intention and an intentional behaviour. While the intentional behaviour – in this case, the running down of the shoe – is a result of the intention to run the marathon, the intentional behaviour is still not intended.¹¹⁶ In this way, Bratman loosens the connection between intentions and intentional actions.

As intentions are tied both to coordinating plans and intentional action, it is important to note their differences. For the purpose of my thesis and argument, I will solely focus on intentions as coordinating plans.

¹¹³ See Bratman, 1987, p. 3.

¹¹⁴ See Bratman, 1984, p. 393-402.

¹¹⁵ See Bratman, 1984, p. 399-400.

¹¹⁶ See Bratman, 1984, p. 394-400.

6.3.2 *Future-directed Intentions versus Present-directed Intentions*

Typically, when we talk of intentions to do something, we talk about future-directed intentions. As the name already suggests, this simply means that we form intentions aimed at future actions. However, while I will be primarily concerned with future-directed intentions, I need to acknowledge present-directed ones. There are cases in which I form present-directed intentions, meaning I intend a near-future action, like intending to make myself a coffee now. Present-directed intentions might have been future-directed intentions earlier. This means that even present-directed intentions, just like future-directed ones, are subject to the demand for strong consistency as they are also part of larger plans and play a coordinating role.¹¹⁷ While I acknowledge the existence of present-directed intentions, I am mainly concerned with future-directed ones.

6.3.3 Basic Features of Future-directed Intentions

To characterise future-directed intentions, we will, again, specify intentions' functional roles and characteristics. These roles and characteristics are worked out by identifying systematic relations between intentions and other psychological states, processes and activities, such as beliefs and desires. In other words, to specify the characteristics and roles of intentions, we need to understand them in a web full of other mental states and how they relate to each other. This methodology, again, fits into the functionalist tradition within the philosophy of mind and action.¹¹⁸

Bratman acknowledges a trilemma we face when looking at future-directed intentions in more detail. First of all, a future-directed intention means I intend to do something in the future. For instance, I now intend to buy a birthday present for my brother tomorrow. This means that my intention, which I have formed right now, needs to somehow influence my actions tomorrow. How can this work? We might be tempted to say that this intention is not irrevocable between today and tomorrow in order to influence my future conduct. However, this would clearly be irrational to say as things change, and we cannot always anticipate the future correctly. This leads us to believe that I should only go and buy the birthday present tomorrow if it is rational for me to intend it today. But then, why should I bother at all to make the intention today? Why should I not just go and buy the present

¹¹⁷ See Bratman, 1984, p. 376-379.

¹¹⁸ See Bratman, 1987, p. 9-10.

tomorrow? This is what makes the trilemma: Future-directed intentions are either (a) metaphysically objectionable (because they involve action at a distance), (b) rationally objectionable (because they are irrevocable), or (c) a waste of time. This trilemma led some philosophers to exclude future-directed intentions from their theories. In the mid-twentieth century, the philosophy of action ignored future-directed intentions. Rather, they focused primarily on intentional action and action done with an intention.¹¹⁹

Intentions, however, are an important element in our practical reasoning and should, therefore, not be excluded from action theory. Just like plans, intentions are a practical element in our (social) lives. There are two main reasons why it makes sense for us to form intentions. First, deliberation is a limited resource for us as it takes time and energy. By settling on future-directed intentions, we allow deliberation and reasons to shape our lives. Second, as I mentioned before, we need coordination. Oftentimes, our goals are very complex, so in order to achieve them, we need to coordinate our present and future activities. These activities need to be coordinated with other personal aims and with the plans of other people in our lives. In other words, we need intra- and interpersonal coordination. Future-directed intentions help facilitate that.¹²⁰

Up until now, we know why it would make sense to form intentions in our lives and what basic characteristics they have to inhabit to make sense. There is still one unanswered concern. An intention might be formed and stays around until the action is needed to be performed, however, what makes it control my conduct? We first need to distinguish between those mental states that are pro-attitude and those that are not. Some prominent examples of pro-attitudes are intentions, desires and valuations. Ordinary beliefs, on the other hand, are not pro-attitudes. A pro-attitude is typically motivational, meaning that in some circumstances, it can move us to act. However, there is a further distinction to be made. Most pro-attitudes are merely potential influencers of conduct. Intentions, on the other hand, are conduct controlling because of their commitment to the action. Coming back to the raised concern, intentions, as they are characterised, are conduct controlling, meaning that when the time of action comes around, they typically move us to act.¹²¹

Because intentions are central to our practical reasoning, they underly norms of consistency and coherence. Contrary to desires, which are not as central in controlling

¹¹⁹ See Bratman, 2003, p. 16.

¹²⁰ See Bratman, 2003, p. 18.

¹²¹ See Bratman, 2003, p. 21-22.

our conduct and actions, intentions are subject to consistency and means-end coherence demands. While it is possible to desire two opposing things at the same time, it is not possible to intend two mutually exclusive ends simultaneously.¹²² Because intentions come with commitment and therefore are conduct-controlling, it follows that they need to be consistent and coherent. Not conforming to consistency and coherence of intentions will refrain intentions from being coordinating roles in our lives.¹²³ Let me elaborate on consistency and means-end coherence for plans and intentions.

My plan and intentions need to be internally consistent, meaning it is possible to execute my plan successfully. There is a further demand on consistency, namely the plan needs to be strongly consistent relative to my beliefs. For instance, let us assume I intend to pick up a package from the post office at 4 pm. However, I believe that I will have an important meeting that I cannot skip from 3-5 pm that day. My intention to go to the post office at 4 pm therefore is not consistent relative to my beliefs. The consistency demand requires my intentions to be consistent with my beliefs about the state of the world.¹²⁴

Further, my intentions need to be means-end coherent. This means my intentions need to be coherent with the means of achieving the intention. Let us come back to the previous example and assume I intend to pick up a package from the post office today at 4 pm. A means of doing so might be to exit the bus two stations earlier than I usually do. I need to intend doing so in order to intend picking up the package. Me not intending the means is incoherent with my intention and therefore mean-end incoherent.¹²⁵

The justification of the consistency and means-end coherence demands derives from our interest to be planning agents. This further means, that we as successful planning agents, once we recognise gaps in these demands are trying to solve them and return to consistency and means-end coherence.¹²⁶

6.3.4 Stability and the (Rationality of) Reconsideration of Intentions

One important characteristic of intentions is their stability. For the formation of intentions to make sense, it is necessary that they have a certain stability. If they were not stable to

¹²² See Bratman, 2018, p. 193-194.

¹²³ See Bratman, 2018, p. 119.

¹²⁴ See Bratman, 1981, p. 31.

¹²⁵ See Bratman, 2018, p. 56.

¹²⁶ See Bratman, 1981, p. 262.

some extent, why should we bother with them in the first place? However, they should not be treated as irrevocable either. This would clearly be irrational as things change, and we are not always able to anticipate the future correctly.¹²⁷

Related to the stability of intentions is the issue of their reconsideration. Bratman claims that certain factors support the stability of intentions and, therefore, their non-reconsideration. Acting on our intentions usually changes the state of the world around us. These changes can make it more reasonable to continue pursuing those intentions. Similar to a snowball effect, following through with our intentions reduces the likelihood of considering competing plans. Furthermore, deviating from our intentions can come with social costs. Once we have made our intentions public, changing them can lead to social consequences – consequences we generally wish to avoid, and which often discourage us from altering our intentions.¹²⁸

Moreover, our intentions are typically elements in larger plans. Reconsidering our intentions, therefore, requires more than revising the intentions themselves. It also demands revisiting prior coordination and rethinking our broader plans. This process consumes both time and mental resources that we mostly try to avoid. Related to this, we often depend on general and typically non-deliberative habits about when we reconsider intentions. These habits are usually in favour of non-reconsideration.¹²⁹

An even stronger constraint on reconsideration is a diachronic one. We, as agents, have the capacity for temporally extended agency, which means we can understand our actions as part of larger plans that span across time, both past and future. We recognise our intentions within these broader, often long-term plans. We are further able to grasp the stable and interconnected structure of our plans, which extend over time. This ability allows us to see how different sub-plans or intentions fit together within a larger plan. Our understanding of this complexity helps stabilise our intentions, as we see them as smaller components within a broader and more complex framework. This planning psychology supports the cross-temporal organisation of our actions, making it easier for us to coordinate, explain, and follow through with our long-term goals.¹³⁰

¹²⁷ See Bratman, 2003, p. 20.

¹²⁸ See Bratman, 2018, p. 114-115.

¹²⁹ See Bratman, 2018, p. 115.

¹³⁰ See Bratman, 2018, p. 115-116.

While our plans and intentions are generally stable, it would be irrational to argue that they are irrevocable. Therefore, it sometimes might be more rational to reconsider our intentions than to follow them. However, when is reconsideration rational?

We can distinguish between three types of reconsideration: deliberative, nonreflective, and policy-based. The deliberative case refers to when I actively deliberate about whether to reconsider my intention. However, we typically do not deliberate in this way but simply reconsider when the need arises. In contrast, nonreflective reconsideration occurs when we reconsider based on habits, skills, or dispositions, without conscious deliberation. Lastly, policy-based reconsideration refers to applying a personal policy about when to reconsider intentions.¹³¹

Reconsidering an intention does not merely open the possibility of changing it, it fully reopens the question of whether to pursue the intention in the first place. It becomes a matter that needs to be settled anew. I do not discard my reasons for intending to act, but new information or options incompatible with my intention become admissible. Alternatively, reconsidering might involve considering a competing option that conflicts with the original intention, implicitly reopening the question of whether to follow through. Strictly speaking, when reconsidering, I temporarily set aside my original intention to A and do not intend to A anymore.¹³²

Two cases might seem like reconsideration but are not classified as such by Bratman. The first is when we find new reasons for an existing intention, reaffirming it without actually reconsidering it. The second is when we consider reconsidering our intentions. In this case, while reconsidering, we do not reconsider our intentions. These cases show that even when not reconsidering, new reasons for our prior intentions can be found.¹³³

Reconsideration can be costly, as it involves updating related beliefs and adjusting elements of larger plans. For instance, reconsidering my intention to go to the supermarket this afternoon means I stop assuming I will be there, and other elements plan may need to be revised. Depending on the scope of the intention and its part in the larger plan, reconsideration can be more or less extensive.¹³⁴

¹³¹ See Bratman, 1987, p. 60-61.

¹³² See Bratman, 1987, p. 62.

¹³³ See Bratman, 1987, p. 62-63.

¹³⁴ See Bratman, 1987, p. 62-64.

Let us now turn to the rationality of reconsideration, focusing on the most common case, namely the nonreflective reconsideration. When is nonreflective reconsideration rational? Bratman proposes a two-tier approach to answer this question, which is analogous to some versions of rule-utilitarianism. In his view, the stability of a plan is determined largely by personal habits and dispositions. For instance, an anxious person might reconsider their plans more frequently due to heightened sensitivity to potential dangers, whereas a less anxious person might show greater plan stability. Since plans are crucial to us as planning agents, our reasonable habits should generally discourage reconsidering prior plans unless there is a significant problem. But what constitutes a problem for a plan? Bratman distinguishes between problems *posed by* a plan and problems *for* a plan. The former refers to essential characteristics of plans and intentions. They pose problems about means and preliminary steps. On the other hand, problems for a plan are problems involving at least one of the following elements: the world differs to what the world was expected when settled on a plan; there has been a relevant change in desires or values; or there has been a relevant change in some of one's other intentions. This type of problem may trigger nonreflective reconsideration. Coming back now to the two-tier account of rationality for nonreflective reconsideration. This account evaluates rationality from an external perspective rather than providing a decision-making guide for the agent. The first tier assesses whether the underlying habits of reconsideration are generally reasonable, taking a consequentialist approach. In other words, do these habits tend to lead to beneficial outcomes? The second tier evaluates the particular case of reconsideration, asking whether it manifests those reasonable habits.¹³⁵

To illustrate, consider Adam's intention to go to the gym every morning. We can apply the two-tier approach to assess Adam's underlying habits of not reconsidering his intention. First, we ask whether his underlying habit of not reconsidering this intention is reasonable. From a consequentialist standpoint, his habit of consistently going to the gym may be beneficial and thus reasonable, as frequent reconsideration could reduce his gym attendance. Next, we apply the second tier to a specific case. Suppose Adam feels unusually tired one morning but does not reconsider his intention to go to the gym. If this fatigue is severe or harmful to his health, his failure to reconsider could be seen as irrational in that instance. We conclude by saying, in this case, not reconsidering his intentions was irrational.

¹³⁵ See Bratman, 1987, p. 64-68.

6.3.5 How Intentions and Plans Relate to Beliefs

One central debate within the philosophy of intentions is their relation to beliefs. Bratman claims, contrary to cognitivism, that intentions do not necessarily involve beliefs. Furthermore, the demands of consistency and coherence of intentions are not derived from the demands of associated beliefs.¹³⁶ Let me explain and expand on this.

Cognitivists about intentions hold that intentions are to be identified with the belief about what one will do.¹³⁷ In other words, “intending to do something entails believing you will do it”¹³⁸. This stems from the claim that “if you have no idea that you will f, then although it may be true that you will f, you do not intend to f”¹³⁹. For instance, I might open the door, and by doing so – without me realising it – I let the cat out. While it is true that I let the cat out, it is not true that I intended to do it. This is because intending to let the cat out would entail me believing I let it out.¹⁴⁰

Bratman, however, argues against the cognitivist view. He claims that intentions are not necessarily tied to one’s beliefs. The transition from a mere preference into an intention is a practical one. This is what he calls the *practical commitment view*, and this transition is not tied to our beliefs.¹⁴¹ To explain his argument, it is necessary to define some terms and ideas. Two main requirements are particularly relevant here.

I will start with instrumental rationality. In simple words, someone displays instrumental rationality if one “adopts suitable means to [one’s] ends.”¹⁴² So, for instance, if my intended end is to eat some homemade pie, I need to adopt a suitable means for it. In this case, a suitable means would be to buy the ingredients and bake the intended pie. If I adopt these means, I display instrumental rationality.

Based on instrumental rationality, Bratman introduced the *Instrumental Rationality Requirement*. He gives the following example: Let us say I intend the end E, and I believe that a necessary means to E is M. Further, I believe that M requires that I intend M. The attitudes towards E and M require a basic requirement of practical rationality, namely the *Instrumental Rationality Requirement*. This requirement demands that I either intend M

¹³⁶ See Bratman, 2018, p. 39.

¹³⁷ See Clark, 2020, p. 308.

¹³⁸ Clark, 2020, p. 310.

¹³⁹ Clark, 2020, p. 311.

¹⁴⁰ See Clark, 2020, p. 311.

¹⁴¹ See Bratman, 2018, p. 56.

¹⁴² Kolodny / Brunero, 2023.

or I give up intending E. To illustrate this, let us revisit the pie example. I intend to eat homemade pie, and I believe a necessary means to eat homemade pie is buying the ingredients and baking the pie myself. Further, I believe that buying the ingredients and baking the pie myself requires that I intend to buy the ingredients and bake the pie myself. The Instrumental Rationality Requirement demands that I either intend to buy the ingredients and bake the pie myself or I need to give up intending to eat homemade pie. In other words, if I do not intend the means for the intended end, I cannot continue intending the end.¹⁴³

The second requirement is the *Believe Closure Requirement*. Let us say I believe that E and I also believe that E only occurs if M. The Believe Closure Requirement demands that either there is a change in at least one of these two beliefs or I believe M. Let me give an example. Suppose I believe that the street is wet, and I also believe the street is only wet if it rains. It is either required that there is a change in one of these two beliefs, or I remain believing that it rains. In contrast to the Instrumental Rationality Requirement, a demand for *practical* rationality, the Believe Closure Requirement is a demand for *theoretical* rationality.¹⁴⁴

Both of these requirements are constraints on the agent's relevant attitudes, namely intentions and beliefs. However, they differ in some sense. While the Instrumental Rationality Requirement is only engaged if I intend E, the Believe Closure Requirement is only engaged if I believe E, whether I intend E or not.¹⁴⁵ Further, these demands are different demands of rationality. One of them is practical, and the other one is theoretical. However, although they are different, they might sometimes interact with each other. In the literature, there are different versions of how much and how tightly they interact with each other. As explained earlier, cognitivism, which Bratman argues against, ties intentions quite closely to beliefs. Its strongest version argues that if one intends to E, then one believes that one will E.¹⁴⁶ Bratman claims that intentions do not necessarily involve beliefs.¹⁴⁷

Having explained the two requirements, I will now illustrate some of Bratman's arguments against the strongest version of cognitivism. While weaker versions of

¹⁴³ See Bratman, 2018, p. 52-53.

¹⁴⁴ See Bratman, 2018, p. 53.

¹⁴⁵ See Bratman, 2018, p. 53.

¹⁴⁶ See Kolodny / Brunero, 2023.

¹⁴⁷ See Bratman, 2018, p. 39.

cognitivism also exist, I will not delve into them or their potential counterarguments. This is because Bratman's critique of the strongest version most effectively clarifies his position within the intention-beliefs debate.

Bratman argues against cognitivism and claims that intentions are not necessarily tied to beliefs. In other words, intending to do E does not need to entail believing I will do E.¹⁴⁸ Let me illustrate some of his examples that support his claim.

Revisiting the Instrumental Rationality Requirement, we see that intentions can conform to its demands even without corresponding beliefs. Suppose I intend to buy melons from a specific shop in my town after work. I change my usual route back home so I will pass the melon shop. However, I know that I am forgetful and am fairly certain that I will forget to stop. Crucially, I do not believe I will stop, but I also do not believe I will fail to stop. In this case, regardless of my beliefs, I conform to the Instrumental Rationality Requirement. This is because I intend to buy melons, I believe a necessary means is changing my route home, and I intend to change my route home. This example demonstrates that intentions can be consistent and means-end rational without being tied to a belief about whether the action will actually occur.¹⁴⁹

Conversely, there are cases where beliefs satisfy the Belief Closure Requirement, but intentions fail to meet the Instrumental Rationality Requirement. For instance, suppose I believe that I intend to buy melons on Monday. However, I have confused the date – I actually intend to buy them on Tuesday, the only day melons are sold. In this case my beliefs are consistent. I believe buying melons requires going on Monday, and I believe intending to go on Monday is necessary. However, my intentions are inconsistent. However, my intentions are inconsistent. I do not actually intend to go on Monday, as the correct means is to go on Tuesday. Here, the Belief Closure Requirement is satisfied, but the Instrumental Rationality Requirement is not. This demonstrates that belief coherence does not necessarily entail instrumental rationality.¹⁵⁰

With these examples, Bratman critiques cognitivism's main assumption about the relation between intentions and beliefs. By distinguishing between practical and theoretical

¹⁴⁸ See Bratman, 2018, p. 39.

¹⁴⁹ See Bratman, 2018, p. 60-62.

¹⁵⁰ See Bratman, 2018, p. 62.

rationality, and illustrating how these domains can diverge, he shows that intentions are not necessarily tied to beliefs.

The discussion about how closely related our intentions are to our beliefs will become useful at a later point in this thesis when I propose methods of testing intentions.

6.4 Summarising Characteristics of Intentions

Before turning to the next and final chapter, in which I will apply the theoretical knowledge about intentions gained in this chapter and apply it to the analysed papers on the intention-behaviour gap, I want to give a brief summary of the most important characteristics of intentions. These characteristics will become central in the next chapter where I will propose methods of testing intentions based on their features.

Intentions are part of bigger plans. Plans are a central feature of our lives as planning agents. They help us organise our lives both inter- and intrapersonally. Further, by settling on plans, we allow deliberation and reasons to shape our lives.¹⁵¹

There is a special commitment to intentions for them to remain over time and guide our actions once the time comes around. This commitment is a central feature of intentions that other pro-attitudes, such as desires, do not have. Because intentions are conduct-controlling, it is not possible to rationally have two opposing or mutually exclusive intentions at the same time.¹⁵² Intentions shape our future actions and our reasoning, so it is logically impossible to intend mutually exclusive ends. This is not the case for desires. This is an important note for testing intentions later.¹⁵³

Another important feature of intentions is their stability. This is, in a way, connected to the special commitment. While intentions are stable, they are not irrevocable as this would be irrational to say.¹⁵⁴ I elaborated the reasons for their stability earlier, however, very briefly one can say that intentions are stable because they are deeply entrenched in a

¹⁵¹ See Bratman, 2003, p. 18.

¹⁵² See Bratman, 2018, p. 193-194.

¹⁵³ See Bratman, 2003, p. 21-22.

¹⁵⁴ See Bratman, 2003, p. 20.

complex web of further intentions and a plan. Changing these intentions in a bigger way may have great consequences for the executing of the bigger plan.¹⁵⁵

In case of reconsiderations of intentions, Bratman proposes a two-tier approach to assess the rationality of non-reflective reconsideration. This is a tool used for external reflection. The first tier assesses whether the underlying habits of reconsideration are generally reasonable, taking a consequentialist approach. The second tier evaluates the particular case of reconsideration, asking whether it manifests those reasonable habits.¹⁵⁶

Further demands include the demand for consistency. Intentions need to be internally consistent, meaning it is possible to execute my plan successfully. Moreover, they need to be consistent with my beliefs about the world.¹⁵⁷ To intend an end, it is necessary to intend the means. This is referred to as the demand for means-end coherence. It is not possible to intend an end without intending the means.¹⁵⁸

All these features are crucial for intentions. In my next chapter I will propose methods to use for identifying actual intentions. These characteristics will be used as indicators for intentions and are therefore crucial and relevant for my proposed methods.

¹⁵⁵ See Bratman, 2018, p. 114-116.

¹⁵⁶ See Bratman, 1987, p. 64-68.

¹⁵⁷ See Bratman, 1981, p. 31.

¹⁵⁸ See Bratman, 2018, p. 56.

7. Applying Bratman's Theory to the Intention-Behaviour Gap Literature

In chapters 3 and 4 of this thesis, I analysed and critiqued (economic) literature on the intention-behaviour gap. Ultimately, I concluded with criticism of its theoretical foundation and its methodology. I identified three key limitations in this body of research: the lack of a clear definition of intentions, imprecise measurement methods, and an insufficient understanding of the unique role that intentions play in our lives. These criticisms can be divided into theoretical and practical issues. The absence of a clear definition and understanding of intentions' unique roles reflect theoretical weaknesses, while the imprecise measurements, though partially stemming from these theoretical gaps, are practical issues.

In chapter 6, I offered extensive theoretical knowledge of intentions and their unique roles in our lives by introducing Bratman's theory on plans and intentions. With his theory, I showed that intentions are more complex and nuanced than portrayed in the intention-behaviour gap literature, addressing the theoretical issues.

The aim of this chapter is to apply Bratman's theory to address the practical limitation in the intention-behaviour gap literature. Based on the theoretical knowledge I have provided in previous chapters, I will suggest ways to improve the measurements and identification of intentions, aiming for more accurate and reliable approaches grounded in a richer theoretical understanding.

Before proceeding, I want to preface and acknowledge that the intention-behaviour gap literature that I analysed is concerned with green consumption. The most basic aim is to investigate a gap between green / ethical intentions and actual behaviour. Therefore, specifically ethical intentions were sought to be measured. Michael Bratman's theory of plans and intentions, however, does not involve a distinct discussion of (potential) ethical elements. Bratman mainly talks about the practical usage of future-directed intentions in our everyday lives. He does not discuss the question of what we should do, what we should intend or in which ways we should change our intentions. There may be more complexity to ethical intentions than there is to intentions, as ethical intentions often come with some sort of special commitment to the more uncomfortable but ethical action. However, for the purpose of understanding intentions in their most basic form, Bratman's

theory can, despite not specifically addressing ethical intentions, offer valuable insights and contribute to a better understanding of the objective.

7.1 Improving Methodology Based on Philosophical Knowledge

In chapter 6, I have illustrated Bratman's extensive theory of intentions, highlighting their most important characteristics and roles. I will utilise this in this chapter. For identifying intentions, it can be beneficial to test for their characteristics to make sure the identification is precise and accurate. Therefore, I will come back to important features of intentions identified in chapter 6 and propose ways to measure them. Some questions aim to identify and capture intentions. Others, however, aim to give more insights into the rationality and stability of present intentions. This might be interesting for further measures such as consumer nudging. Ultimately, the aim of this chapter is to show how utilising Bratman's theory, an extensive definition and theoretical discussion can benefit methodology in empirical research. This will further strengthen my argument that the lack of theoretical understanding of intentions has significant effects on the quality on the study's measurements. I will start by illustrating my proposed questions. Subsequently, I will give some more input of how I suggest they should get used and what more can be learnt from Bratman's theory of intentions for the empirical research of the intention-behaviour gap.

Before detailing the methods for testing intentions, I want to outline some recommendations for applying these questions in empirical studies.

To ensure a robust measurement, I suggest using multiple questions for each characteristic of intentions. For most features, I will list and discuss at least two questions. By posing varied questions on the same feature, responses can be cross-verified, enhancing the reliability of the results. Additionally, I recommend a random distribution of these questions within the survey to encourage participants to reflect more deeply on each one without being biased from their answer to the previous question from the same category.

In some analyses, I have suggested giving the participants a definition of intentions before asking them whether they have (green) intentions. This ensures that participants understand what is meant by 'intention' before affirming or denying its presence. However, in the methods I propose for testing intentions, providing such a definition may not be necessary. This is because my method focuses on assessing whether participants'

intentions align with the key characteristics identified in Bratman's theory. Offering a definition beforehand could inadvertently influence participants' responses. They may feel inclined to answer in a way that conforms to the provided definition rather than truthfully expressing their intentions.

Before asking participants my proposed questions, I recommend first inquiring whether they have green intentions. If they affirm this, participants should be asked to specify one of their green intentions and indicate which specific intention they will keep in mind when answering the subsequent questions. This approach helps ensure the questions are more relatable and comprehensible, as participants can apply them to a concrete example. Additionally, collecting data on specific green intentions provides valuable insights into the areas of life where participants are most likely to adopt green behaviours, enabling researchers to categorise these intentions for further analysis.

7.1.1 Coordinating Our Lives

A practical reason for being planning agents and, therefore, including intentions in our lives is the coordinating roles they play. Plans and intentions help us coordinate our lives with our own plans and others' plans. Settling on an intention stops our deliberation on the topic and lifts a mental load off our minds. This means that by forming an intention, we usually see the case as settled and do not keep deliberating about the topic any further.¹⁵⁹ The aim of a question identifying the coordinating role it plays in our lives is to examine whether the study's participant sees the case as settled without further deliberating about the case.

- Does your intention make you stop deliberating whether to execute the intended action?

¹⁵⁹ See Bratman, 2003, p. 18.

7.1.2 Intentions as Parts of Bigger Plans

Intentions are embedded in bigger plans and typically help to fulfil those plans.¹⁶⁰ The embeddedness in bigger plans, therefore, is a characteristic feature of intentions, which can be tested for by asking the following questions:

- Can you identify a plan (in the sense of a bigger goal or aim) your current intention serves? If yes, what is it?

This is a very straightforward question that can identify whether the person's intention is actually embedded in a bigger plan.

- Do you have intentions for similar future actions? If yes, please name it / them.

In the case of an affirmative answer to the question, researchers need to examine the similarity. Depending on the degree of similarity and whether it could serve the same plan, assuming the existence of a larger plan in which these intentions are embedded might be possible.

7.1.3 Reasoning

In contrast to desires and beliefs, intentions are important elements of practical reasoning. They give answers to practical questions, asking what to do when faced with multiple and conflicting alternatives.¹⁶¹ The following question helps identify whether participants' intentions are part of their practical reasoning.

- Does your intention influence further action? (e.g. going to a different supermarket to buy the specific product you want) If yes, please give an example with your previously stated intention.

This question aims to determine whether a person's intention serves as a reason to carry out an action that they might not have taken without that specific intention.

¹⁶⁰ See Bratman, 2018, p. 42.

¹⁶¹ See Bratman, 2018, p. 185-186.

- Do you reason from your intention to make further choices? (e.g. because I intend to buy organic, I will go to the organic supermarket) If yes, please give an example with your previously stated intention.

This is a straightforward question aiming at identifying whether the intention acts as a practical reason for further actions.

- Does your intention sometimes act as a reason for other plans? (e.g. because I intend to not eat meat again, I go to a vegetarian deli for lunch) If yes, please give an example with your previously stated intention.

This question is even more direct, aiming at identifying whether the intention acts as a practical reason for further actions.

7.1.4 Intentions as Conduct-Controlling

Intentions usually come with a certain level of commitment making them stable.¹⁶² While not all intentions inhabit the same commitment, they are conduct-controlling. Unlike desires, once the time for the intended action comes around, our intentions control our behaviour in these situations. This further implies that it is rationally impossible to have two mutually exclusive intentions simultaneously, while this is still possible for desires.¹⁶³ By asking the following questions, it is possible to identify intentions based on their commitment levels and, at the same time, further distinguish them from desires. This is an important factor as it is easy to confuse intentions with desires in the everyday usage of these terms in our language.

- Do you think, once the time for the intended action is here and nothing unforeseen has happened, you will act according to your intention?

This is a straightforward question to identify whether the participant believes their intention is conduct-controlling. While it is possible to detect the participant's subjective assessment of their intention being conduct-controlling, it is not an observation of the actual behaviour. Therefore, this question can only exclude an intention if the participant

¹⁶² See Bratman, 2018, p. 114-116.

¹⁶³ See Bratman, 2003, p. 21-22.

answers with ‘no’. However, it cannot verify an intention, as verifying a ‘yes’ response at this point in the study is not possible.

- Would you likely deviate from your intention when the time for action is here?

This question aims to capture the likelihood of behaviour, in other words, whether the intention is conduct-controlling. Because this question is directed towards anticipated behaviour, we cannot be certain that the answer to this question remains verified. However, this question might be able to give further insights into the commitment levels of participants. The subjective belief about the likelihood of deviating might be able to tell the researchers something about the participants’ commitment levels.

I suggest offering a very likely to very unlikely scale with some options in between to answer this question. Further, I suggest asking for an explanation for their answer. Depending on the reasons for their (un)likelihood to deviate, researchers can identify whether commitment levels were high or not. However, researchers must be cautious as depending on the reasons for deviation, participants might not have revealed anything about their commitment levels at all. For instance, while I might answer the question with ‘rather likely to deviate’ and my reasons for ticking this is ‘I am forgetful and might forget to act upon my intentions’, I have not revealed anything about my commitments. I might be very committed, however, because I know I am forgetful, I believe I might forget to act accordingly. It is important for the researchers to be cautious when evaluating the answers. At this point, having a robust and comprehensive understanding of intentions and their characteristics is crucial.

- Do you believe you have further intentions that contradict your intention? If yes, do you believe they are incompatible? If yes, do you still intend both? Please state your intentions.
- Do you have two (or more) mutually exclusive intentions? If yes, do you still intend both? Please state your intentions.

These questions aim to identify whether the participants are irrational in their intentions. According to Bratman’s theory established earlier, it is irrational for an individual to believe they have two mutually exclusive intentions and still intend both. While the

outcome of these questions might not be directly relevant for identifying intentions, it provides an opportunity for further analysis. Gaining insights into the (ir)rationality of consumers' green intentions can be beneficial for developing strategies to nudge them toward more ethical consumption behaviours.

7.1.5 Coherence and Means-End Consistency

Intentions need to be internally consistent. This means it needs to be possible, in theory, to execute my plan successfully. Further, they need to be consistent with my beliefs about the world.¹⁶⁴ Moreover, when intending the end, it is necessary also to intend the means. It is not possible to intend an end without intending the means.¹⁶⁵ This is referred to as the demand for means-end coherence. Meeting this demand is necessary for the intention to be rationally intended. Questions that can test the demands for coherence and means-end consistency can be the following.

- Do you believe your plan, which your intention is part of, is consistent in the sense that it would be, in theory, possible to execute it successfully?
- Are there any obstacles in your plan that make you think it is not possible to execute the plan successfully? If yes, what are they?
- Is it possible, considering the state of the world and your current knowledge of it, to successfully execute your intention? If not, what is standing in the way?

All three questions aim to identify the same thing, namely whether the participant's intention is not internally consistent relative to her belief. However, they are all a little bit different in their wording and how the question is asked. By asking the same question in different ways, answers can be better verified and tested.

The second and third questions ask the participant to explain their answer, which can provide further insights into the consistency of their intentions. Depending on the explanations, researchers might conclude that the intention is not internally consistent. For instance, consider question two. Let us assume the participant affirms that question and states that her intention is to buy fairtrade chocolate instead of conventional chocolate

¹⁶⁴ See Bratman, 1981, p. 31.

¹⁶⁵ See Bratman, 2018, p. 56.

when shopping tomorrow. However, she knows that the supermarket she plans to visit does not sell fairtrade chocolate. In this case, her intention is not internally consistent with her beliefs about the world. This inconsistency might even suggest that the stated intention is more of a desire than a fully formed intention. On the other hand, if the participant explains that a potential obstacle to her plan is the possibility that the fairtrade chocolate might be sold out when she arrives at the supermarket, this does not indicate internal inconsistency relative to her beliefs. In this scenario, the obstacle represents a possible but uncertain event, rather than a direct conflict between her intention and her belief about the state of the world.

- Have you identified means to successfully execute your intention? If yes, do you intend the identified means?
- What means, if any, have you identified to execute your intention? Do you intend those means?

These questions aim at testing the demand for means-end coherence. Again, they are very similar, however, as argued before, having more than one question aiming at identifying the same feature of intentions, makes the outcome more reliable.

Testing the demands for coherence and means-end consistency is valuable for researchers because it helps identify the potential for an intention-behaviour gap. Participants' answers may reveal that, while an intention exists, it does not fully conform to the demands of coherence and means-end consistency, suggesting it has not yet been fully rationalised. The absence of coherence and means-end consistency could contribute to an intention-behaviour gap. Thus, gaining these insights is crucial for understanding why the gap may occur. Moreover, they can inform practical interventions to nudge and support consumers in taking intended ethical actions. By identifying where individuals need additional assistance in acting upon their intentions, researchers can develop strategies to better align intentions and behaviours.

7.1.6 Stability

The stability of intentions, as discussed earlier, is connected to their special commitments. Intentions are stable, however, not irrevocable, as this would be irrational to say.¹⁶⁶

¹⁶⁶ See Bratman, 2003, p. 20.

Summarising and simplifying what I have elaborated in earlier chapters before, intentions are stable because they are deeply entrenched in a complex web of further intentions and a plan. This further implies that changing our intentions in a bigger way may have great consequences for executing the bigger plan.¹⁶⁷

- In case of changing your intentions, are there social costs you would face? (e.g. letting someone know because it influences their day or plans as well)
- In case of changing or deviating from your intentions, would you need to adjust further intentions and plans?

Both questions aim at testing the stability of participants' intentions, however, they aim at different features of stability. Since stability is ensured by intentions playing a coordinating role in our lives and their embeddedness in bigger plans, it is possible to detect the stability of intentions from different points. The first question is connected to the inter-personal coordinating role intentions play. Social costs, in this context, refer to the consequences or impacts that changes in the participant's intention might have on their social relationships and interactions. By asking whether the person would face any, we can detect whether the intention plays an interpersonal coordinating role for the participant. It is important to note that while the affirmation of this question acts as evidence for the existence of an intention, the negation of this question does not imply that there is no intention. It is possible that some intentions do not play an interpersonal but rather a mere intrapersonal coordinating role. The intrapersonal coordinating role is tested by asking the second question.

While the elaboration and these questions on the stability of intentions highlight important characteristics of intentions and plans, another type of stability becomes particularly relevant within the context of the intentions-behaviour gap. Intentions, as elaborated and tested above, can be stable in the sense that they are embedded in a broader web of intentions and plans. However, the stability of intentions directly relevant to the intention-behaviour gap literature is more coarse-grained.

Specifically, this literature seeks to understand why the gap exists – that is, why intentions fail to remain stable enough to lead to corresponding behaviour. This (in)stability goes beyond the embeddedness of intentions in larger plans. It also refers to other characteristics of intentions that may be flawed or entirely lacking, such as how

¹⁶⁷ See Bratman, 2018, p. 114-116.

effectively an intention serves as a further reason or how successfully rationalised it is. Not only can flawed characteristics contribute to instability, but external factors can also play a role in undermining intentions and their successful translation into behaviour.

Testing the overall stability of intentions, as it is relevant to the intention-behaviour gap, requires assessing all the characteristics of intentions as well as examining potential external contributors to the gap. Testing stability involves understanding how well intentions are embedded in larger plans, however, this is only one component of the overall stability relevant to the intention-behaviour gap.

7.1.7 Rational Reconsideration of Intentions

Nonreflective reconsideration might be a tricky aspect of intentions to interpret when measuring. While the nonreflective reconsideration of an intention is possible, and might be rational, it is incumbent on the researchers to identify whether the reconsideration is a rational deviation from the initial intention or if it can already be labelled as an intention-behaviour gap. The aim of asking these questions is not to identify whether the participants reconsidered their intention at all, but rather to identify at the point of reconsideration whether it was a reconsideration of the intention or a failure to translate the still existing intention into behaviour which in other words is an intention-behaviour gap.

- Have you ever reconsidered your intention before? If yes, why and at what point? (e.g. right after forming the intention; right before the time was here to execute the intended behaviour)

When asking this question it is beneficial to give information to the participant about what is meant by ‘reconsidering’. Reconsidering, in Bratman’s theory, means to fully reopen the question of whether to intend the intention at all. Strictly speaking, at the time of reconsidering, the person does not intend anymore.¹⁶⁸ If the person denies reconsideration, stability of their intention might be inferred. In the case of a subsequent failure of translating the intention into behaviour an intention-behaviour gap might be concluded. In case of affirming the question and depending on the reason and the point of reconsidering, the researchers can conclude by identifying an actual reconsideration of

¹⁶⁸ See Bratman, 1987, p. 62.

the intention before the behaviour would have been needed to be executed. However, for instance, if the participant answers to have reconsidered her intention right before the time was here to execute the intention, it is beneficial to be cautious for their reasons and depending on these, the researchers can interpret whether it was in intention-behaviour gap, a mere reconsideration at a later stage or due to an unforeseen change of the state of the world.

- Have you adjusted your intention before? If yes, in what ways?

Depending on the scope of adjustment, it might be possible for researchers to identify whether the adjustment was a reconsideration and deviation from the prior intention and further maybe even an intention-behaviour gap, or if the participant has not reconsidered but merely reaffirmed their intention by finding new reasons for it. Depending on the specific adjustment and its scope researchers can learn more about the stability of intentions as well as potential reconsidering or even an intention-behaviour gap.

7.2 General Lessons from Philosophy and Final Words

To conclude this chapter, I want to say some final words on the application of Bratman's theory of intentions to the empirical literature on the intention-behaviour gap. I want to highlight some general lessons that can be learnt but also the limitations of the application from philosophical theory to the intention-behaviour gap literature.

Noted in some papers on the intention-behaviour gap which I analysed in chapter 3 is the social desirability bias in empirical studies.¹⁶⁹ This bias describes the “tendency of individuals to underestimate (overestimate) the likelihood they would perform an undesirable (desirable) action.”¹⁷⁰ This might lead participants to answer the questions in a way which might not necessarily be true to them personally but to what they think society desires. This bias can lead to unreliable study outcomes, undermining the explanatory power of the empirical work. The social desirability bias, I believe, is

¹⁶⁹ See Araç / Çabuk, 2023, p. 1341.; See Carrington et al., 2010, p. 141.

¹⁷⁰ Chung / Monroe, 2003, p. 291.

something that can only be tried to be minimised rather than assumed to be erased fully. This is because any survey, questionnaire, or interview is a superficial setting not reflecting reality for certain. Therefore, researchers ought not to assume the social desirability bias to be erased fully. However, by asking more complex questions about the features of intentions, rather than asking about the mere existence of an (socially desired) intention, this bias can be minimised as participants might not be fully aware of the characteristics of intentions. As already mentioned, the random distribution of questions can further lead to more reliable results as participants cannot be guided into desired answers but are tested in different ways and at different points of the questionnaire.

My proposed questions were methods for surveys. This is because most of the studies I analysed were using surveys.¹⁷¹ However, I want to acknowledge other forms of empirical research methods. While my proposed questions aim at successfully identifying intentions through testing different characteristics of them, this can be also achieved in (semi-structured) interviews. These allow for more freedom for participants to explain their thoughts on their intentions and plans. Further, this makes it easier for researchers to immediately enquire when participants have interpreted questions wrongly or some answers are unclear to researchers. Even though (semi-structured) interviews are also beneficial for identifying intentions reliably, they might be more tricky to analyse and interpret correctly. Whichever method is conducted a comprehensive theory and idea of intentions is necessary to be able to identify intentions in order to arrive at reliable and valuable results.

In my thesis I focused on providing a solid theoretical foundation on intentions in order to make research on the intention-behaviour gap more reliable. I was merely addressing the intention part of this complex issue that is the intention-behaviour gap. I have not addressed any issues regarding the measurement of behaviour, although this is something that might need more refinement too.¹⁷² A comprehensive theory of intentions, however, is an essential foundation for future research on the topic of the intention-behaviour gap and without it measuring behaviour becomes obsolete.

¹⁷¹ See Araç / Çabuk, 2023.; See Gleim / Lawson, 2014.; See Kennedy et al., 2009.; See Nguyen et al., 2019.

¹⁷² See Hassan et al., 2016, p. 234.

8. Conclusion

This thesis contributes to the intention-behaviour gap literature by applying insights from Michael Bratman's theory of intentions to the current methodology and empirical practices of that literature. I argued that the existing intention-behaviour gap literature in ethical consumerism contexts lacks a nuanced understanding of intentions and their unique role. This further leads to imprecise methods for measuring the intentions of study participants. Through an analysis of several key papers, I highlighted these issues.

Intentions are already an established topic in philosophy, especially in action theory. Michael Bratman, a contemporary philosopher, majorly contributed to this subject. He offers a comprehensive theory of intentions, characterising them as being embedded in bigger plans, conduct-controlling, stable, coherent, and consistent. I introduced his theory to reply to the shortcomings of understanding the uniqueness of intentions in the intention-behaviour gap literature.

The main aim of this thesis was to address the identified limitations in the intention-behaviour gap literature by applying theoretical knowledge from Bratman's extensive theory of plans and intentions. By illustrating intentions, their main characteristics and their relations to other mental states, I addressed the theoretical limitations in the intention-behaviour gap literature, namely the lack of definition of intentions and understanding of their unique roles. This further acted as a basis for addressing the third limitation – the imprecise measurement of intentions. Drawing on the theoretical knowledge gained from Bratman's theory, I proposed refined methods of identifying and testing intentions in empirical studies.

While I analysed, critiqued and addressed shortcomings regarding intentions, I acknowledge that a comprehensive exploration of the intention-behaviour gap must also consider behaviour itself. This aspect, though beyond the scope of my thesis, holds great potential for further enriching future research on and understanding of the intention-behaviour gap.

In conclusion, deepening the understanding of the intention-behaviour gap will lead to more effective application and developments in areas such as consumer behaviour, nudging and paternalism, and public policies. In this thesis, I have taken a first step toward a more precise understanding of this phenomenon and ultimately demonstrated how economics can greatly benefit from philosophical knowledge.

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Appendix

Abstract (English)

This thesis addresses significant limitations in the intention-behaviour gap literature, particularly the absence of a clear definition and nuanced understanding of intentions as well as the imprecise methods of measuring them. This oversight may lead to unreliable study results and hinder the development of effective economic interventions. I argue that a deeper understanding of intentions and their unique roles is essential for advancing research in this area. Philosophy, especially action theory, can help address these issues. Michael Bratman, a contemporary philosopher, offers a robust and comprehensive theory of intentions, characterising them as being embedded in larger plans, conduct-controlling, stable, coherent, and consistent. Such a robust framework is currently underrepresented in the intention-behaviour gap literature. Integrating insights about the nature of intentions into the empirical research within the intention-behaviour gap literature is crucial for enhancing the precision and reliability of studies. This thesis aims to resolve the key limitations by presenting a robust theory of intentions and proposing refined empirical methods for measuring them, ultimately demonstrating how philosophical theory can benefit economics.

Abstract (Deutsch)

Diese Arbeit beschäftigt sich mit maßgeblichen Einschränkungen in der Intention-Behaviour Gap Literatur, insbesondere mit dem Fehlen einer klaren Definition und eines angemessenen Verständnisses von Intentionen sowie den ungenauen Methoden zu ihrer Messung. Dieses Fehlen kann zu unzuverlässigen Ergebnissen von empirischen Studien und die Entwicklung wirksamer ökonomischer Interventionen behindern. Ich argumentiere, dass ein tieferes Verständnis von Intentionen und deren besonderen Rollen entscheidend ist, um die Forschung in diesem Bereich voranzubringen. Philosophie, im Speziellen Handlungstheorie, kann hierbei nützliche Erkenntnisse beitragen. Michael Bratman, ein zeitgenössischer Philosoph, bietet ein robustes und umfassendes Verständnis von Intentionen. Nach seinem Verständnis sind diese eingebettet in Pläne, verhaltenssteuernd, stabil, kohärent und konsistent. Eine derart robuste Theorie ist in der Intention-Behaviour Gap Literatur noch unterrepräsentiert. Die Integration der philosophischen Erkenntnisse über das Wesen von Intentionen in die empirische Forschung innerhalb der Intention-Behaviour Gap Literatur ist entscheidend, da sie letztlich zu einer verbesserten Forschung und folglich zu verlässlichen Resultaten führen wird. Diese Arbeit zielt darauf ab, die maßgeblichen Einschränkungen zu beheben indem eine umfassende Theorie von Intentionen präsentiert und verfeinerte empirische Methoden für das Testen dieser geboten werden. Schlussendlich zeigt dies auch, inwiefern Ökonomik von philosophischer Theorie profitieren kann.