

## Maintaining Behavioral Balance Because of Continuously Having to Readdress the Situation: Flexibility

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### Abstract

In the social and behavioral sciences, the subjective nature of the behavioral flexibility that an individual can display in situations has raised concerns regarding the stability or replication of obtained evidence about personal concepts, such as personality, social interaction, psychological well-being, and learning. The concerns apply specifically to the measurement and data analysis of individual behavioral flexibility in situations. In this theoretical article, the subjective nature of individual behavioral flexibility is considered by focusing on what happens before the behavior appears by including the situation via the decision-making process of maintaining behavioral balance in line with oneself. The aim of this article is to place in the forefront and clarify the major questions that arise in studying the process of behavioral decision-making of the person in the situation. More specifically, the focus is on discovering and clarifying if the individual interpretation of a continuing situation can be limited to certain features of personal characteristics in relation to certain situational components that together can explain the maintaining of behavioral balance. A schematic presentation of the behavioral decision-making process is proposed and discussed for the purpose of conducting person-situation research studies.

### The Subjective Nature of Human Behavioral Flexibility

The issues regarding the study of the subjective nature of human behavioral flexibility (e.g., Kashdan, 2010; Lomas, 2021; Yildirim et al., 2022) has led Van Velzen (2025) to argue in favor of focusing on the *process* of individual behavioral decision-making by studying the situation as it is interpreted by the person because that is what has led up to actual behavior. In this way, the influence of the situation across time is included in the interpretation and criteria that were employed by the individual to arrive at certain behavior. This theoretical article substantiates the article of Van Velzen (2025) in order to create new openings for the setting up of research studies on human behavioral flexibility by including the situation. In this article, the process of individual behavioral decision-making is defined as the person's interpretation of that which is happening in an actual situation in the form of a personal evaluation of how the continuation of features in the situation has led up to decisions for personally considered appropriate behavior. Although this definition deviates from research on human decision-making, such as deciding based on beliefs and perceived control (Ajzen, 1991), the weighing of choices and values (Kahneman, 2011), and the intentions for behavior regarding specific topics (e.g., loss aversion, social preferences, and uncertainty: Chai et al., 2021; Sahu et al., 2020), it is an important definition to understand the properties in behavioral decision-making because it connects person and situation across time. The aim of the study of the individual process of behavioral decision-making is to understand when and why certain behavioral decisions are

made based on personal and situational features. This article presents three sections that follow the questions that were raised in Van Velzen (2025): (a) How does a person maintain behavioral balance?; (b) How individual-specific is the maintaining of behavioral balance?; and (c) When and why is the one behavior employed over the other?

### **How does a Person Maintain Behavioral Balance?**

Van Velzen (2025) argued, where groups of birds that swarm in the sky can refer to the analogy of the typical or habitual behavior of groups of persons, such as inter-individual groups of students' general learning behavior, the birds' decision to prepare for migration that is often indicated by a few birds, can refer to the analogy of person-specific behavioral decision-making, such as the individual student's decision-making on learning behavior to adapt to a specific homework situation. For example, where two students may have similar preferences for how to learn in the homework situation (Van Velzen, 2024), in the specific homework situation to learn for an exam, the one student, who may in certain situations experience exam-anxiety (i.e., not as a stable personal characteristic), may make changes in learning that vary from another student, who is more exam-relaxed in this particular situation. Different persons can have similar *overall* preferred or habitual behavior regarding a certain situation, but they do not necessarily have to react like twins in the *actual* situation. In the actual situation, their interpretation also depends on the present context (e.g., the amount of homework in relation to their personal knowledge of doing homework) and personal and situational circumstances (e.g., having a headache and a fallout with friends).

This can raise the question of what is behavioral decision-making. The history of research on human behavioral decision-making, which started around 1950 with expected utility as the main decision-making feature, has focused on various decision-making features, such as rationality, judgments, goals, and self-interest, each in relation to specific contextual features, such as reckoning with social expectations and facing uncertainty (see Chai et al., 2021; Sahu et al., 2020, for overviews). Research on human behavioral decision-making also is a highly interdisciplinary research field that has yielded many theories. Overall, all behavioral decision-making theories struggle with defining the features of behavioral decision-making and the related contextual features as a result of those features coming forth from various sources, being open to varying individual interpretations, being open to deviating preferences across time, and not involving how people deal with situational uncertainty. That is, these studies focus on the behavioral decision-making of groups of persons in certain situations.

However, the situation or what is happening not only can be interpreted differently by different persons, the situation also can be dynamic because of what is happening is occurring across time (Van Velzen, 2023). Then, not all situations are equally dynamic. For example, Bartlett (1932) pointed out that the typical visiting of a restaurant has the fairly stable sequence of arriving, seating, selecting from the menu, ordering, eating, paying, and leaving the restaurant. Such a stable sequence of events in a situation is called a scheme and it can be found in countless situations, such as the average homework situation for students, a typical workday at the office, and going to the gym after work. Having schemata for everyday typical situations is useful for humans because schemata give a feeling of certainty and enable the development of habitual behavior (David et al., 2024; Verplanken & Orbell, 2022). Moreover, schemata and habitual behavior provide for time, which the mental processes require to react to the hustle and bustle that can occur in situations.

When the individual in the actual situation is, to a certain degree, anticipating the arriving of *uncertainty* in the schemata because time goes by and, therefore, can lead to new turns in what is happening, the individual can select descriptive-based behavioral decisions from his or her knowledge (i.e., obtained via experiences in the past) about advantageous behaviors in certain situations, and he or she can select experienced-based behavioral decisions from current experiences about the situation (see Kudryavtsev & Pavlodsky, 2012, for a review). The person in a situation connects certain features of the situation to his or her knowledge about experienced behavioral decisions and its consequences, and to oneself-in-the-situation to track the way the situation is developing. Someone's knowledge about appropriate behavior for certain situations can answer a person's question about what to do if the situation develops across time in agreement with typical situations and if rare events will occur.

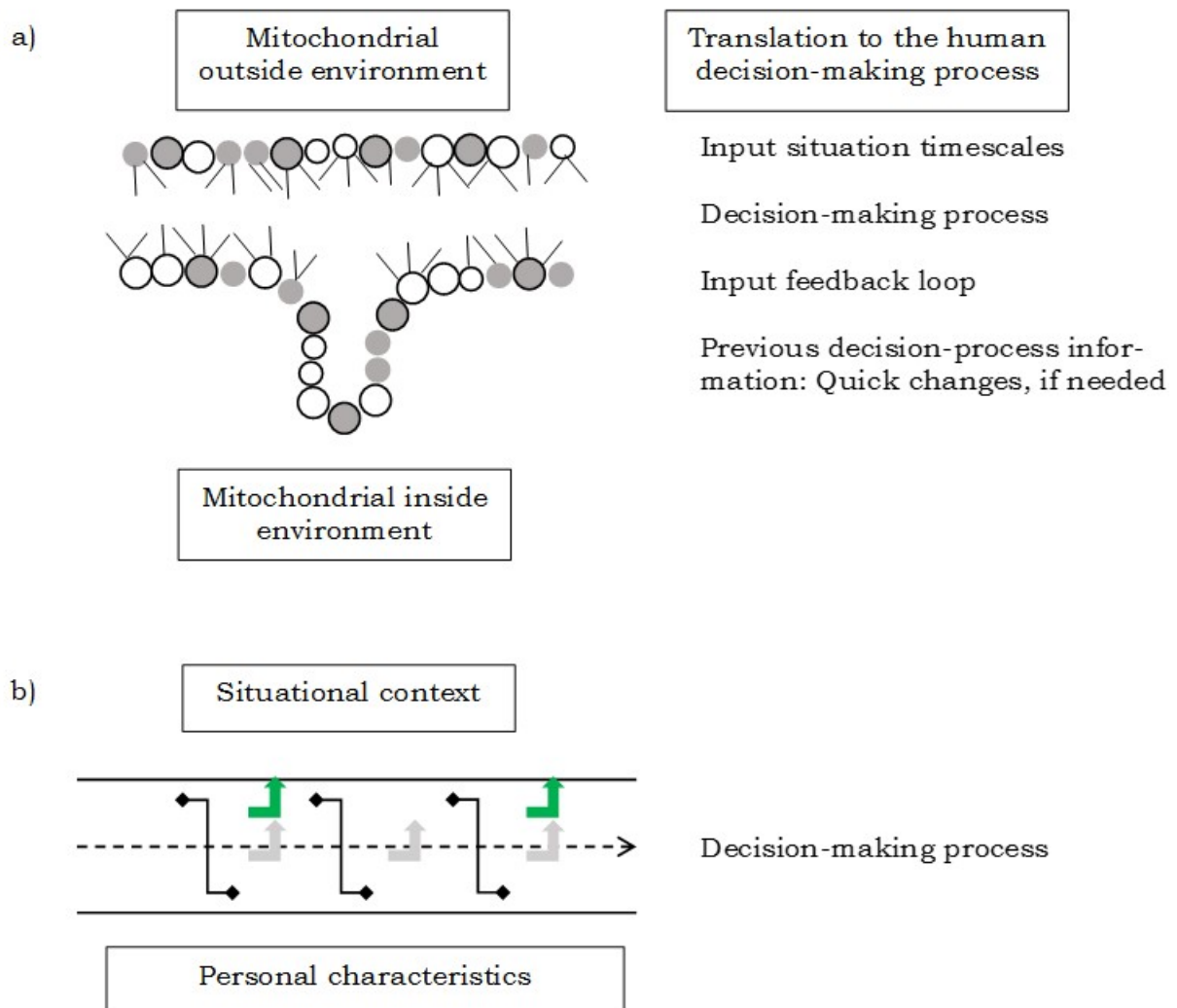
Although this knowledge is useful for selecting appropriate and preferred behavior, the behavioral decision can be *inconsistent* with other behavioral decisions in similar situations due to someone's present circumstances that can give rise to certain thoughts and feelings, such as being bored, impulsive, and tired. Therefore, although it may appear, at first sight, as if the selection of behavioral decisions is prone to inconsistency, in fact, these apparent inconsistencies can be the consequence of the nature of situational behavioral decision-making as a subjective process steered by maintaining behavioral balance in line with oneself.

Aside from personal and situational circumstances, behavioral decision-making is also subjective in nature due to the person in the situation who interprets oneself in that situation (Soyer & Hogarth, 2015). That is, behavioral decision-making is prone to a degree of *bias* or a prejudice in terms of an opinion formed based on certain features of the situation. This bias can influence behavioral decision-making from subtle up to gross ways and from positive up to negative ways. This bias is related to maintaining balance in behavioral decision-making in terms of aligning to someone's self-identity (Hagger & Chatzisarantis, 2006; Verplanken & Orbell, 2019) and, as such, it can enhance a feeling of certainty.

Regarding the aforementioned concepts of uncertainty, inconsistency, and bias in relation to maintaining balance in behavioral reactions, it is reasonable to suspect that these can complicate the research on inter-individual grouping of behavioral decision-making as a consequence of insufficiently assessing when and why a person needs behavioral flexibility to adjust to the interpreted situation. That is, the research tasks that are commonly employed to study behavioral decision-making may not be sufficient to understand the complexity of behavioral decision-making in actual situations, as the research literature provides for contradictory evidence (see Buelow et al., 2024, for an overview). In search of appropriate measurements for assessing flexibility in behavioral decision-making in order to maintain behavioral balance, Van Velzen (2025) discussed the function of the mitochondrial bilayer membrane.

Employing a biological system in search of clarifying a completely other process and phenomena is called biomimicry. Biomimicry refers to learning from nature by developing solutions to all kinds of problems, such as the design of unconventional shapes in architecture, innovative water-repellent materials (e.g., raincoats), and the replication of biological functions via electronic and mechanical equivalents (see Verbrugghe et al., 2023, for an overview). The reason for wanting to learn from nature via biomimicry is that natural systems are known for their circular resource, intelligence, and energy-saving and self-sustaining qualities. Hence, biomimicry is an interdisciplinary research field that includes architects, engineers, and designers, and

it often demands collaboration with biologists, but hardly other scientific disciplines. For example, biomimicry in management is rather underdeveloped (Mead & Landrum, 2020). Although biomimicry studies are more substantiated than the rough comparison that I will make here, for the moment it is considered to be sufficient because the mitochondrial bilayer function is not yet completely understood, but its function can be employed as an analogy for research studies on flexibility.



*Figure 1.* (a) Schematic representation of the mitochondrial asymmetric bilayer membrane system and its translation to the human decision-making process. (b) Abstract presentation of the human decision-making process across time for research studies.

In Figure 1a, the left-side drawing and text refer to the mitochondrial bilayer membranes from a biological perspective, and the right-side text is the translation for research studies on the human decision-making process. The left-side picture of Figure 1a shows the mitochondrial membrane as it currently is understood by cell

biologists (Pabst & Keller, 2024). The mitochondrial membrane has a bilayer (i.e., outer and inner membrane) and cristae. The outer membrane of the mitochondrion is connected to the external surrounding environment, the inner membrane is connected to the internal environment of the mitochondrion. Due to this bilayer structure, the mitochondrial membrane has an inter-membrane space that gives processing time to the chemical exchange between the outer and inner membrane. The cristae are bulges of the inter-membrane space that can support the inter-membrane space in reacting quickly and, possibly, in creating prolonged time for chemical exchange. Although the disordered structure of the make-up of the bilayer membrane is not yet completely understood in terms of enabling its function, it is known that the membrane enables slow to quick biochemical adaptation to external and internal environmental changes.

The right-side text of Figure 1a shows the proposed translation to human behavioral decision-making (Van Velzen, 2025). The outer and inner membrane represent the individual's input of the interpreted situation in relation to oneself, which consists of the situation and the context or what is happening and which are the perceived and valued situational features. In this respect, because the subjective situation is relative to the observer, the observer will, in comprehending the situation and oneself as a whole, observe and focus on some situational features more intensely than on other situational features. This is called timescales (i.e., derived from the concept of temporal window frames: Buehner, 2005). The inter-membrane space represents the processing time that is required to comprehend the situation, which can be assumed to require feedback loops because in this way previously evaluated person-situation information from the connected outer and inner environment can be returned into the behavioral decision-making process to reexamine it with the present information of the outer and inner environment. Therefore, the process refers to the timescales and feedback loops that together enable the decision-making process. The cristae can be envisioned as the ability to keep the information from the outer and inner environment that is considered to be essential, in working memory.

This brings us back to the title of this section, which is also a research question for future research studies: How does a person maintain behavioral balance? Figure 1b shows three kinds of arrows in the inter-membrane space that consists of the upper bold line, the lower bold line, and the dotted arrow line: (a) the black-colored elbow double-arrow connector; (b) the grey-colored bent-up arrow; and (c) the green-colored bent-up arrow. The upper bold line represents the outer situational context, the lower bold line represents the inner personal characteristics (i.e., memorized knowledge, including personal experiences), and the dotted arrow line represents the mental process of behavioral decision-making. The black-colored elbow double-arrow connector represents the timescales as the connection between person and situation, the grey-colored bent-up arrow represents feedback loops that keep certain evaluated person-situation information in working memory, and the green-colored bent-up arrow represents the constructed behavioral decision.

Conducting research on the behavioral decision-making process as shown in Figure 1b entails three assumptions. First, studies on the behavioral decision-making process cannot refer to random situations because it requires a specific situation, such as high school students' homework situation in relation to learning behavior, to keep the amount of variation in the data workable. Second, the study of the behavioral decision-making process needs to take into account a certain period of time to assess the interconnection between person and situation because, otherwise, the amount of obtained data may not be understood comprehensively. Third, although the complete

behavioral decision-making process most likely will remain beyond the reach of the person's conscious awareness, the decisions made can be expected to be within the reach of conscious awareness because their effects need to be inspected by the person further along the time line (c.f., Brown, 1987).

### **How Individual-Specific is the Maintaining of Behavioral Balance?**

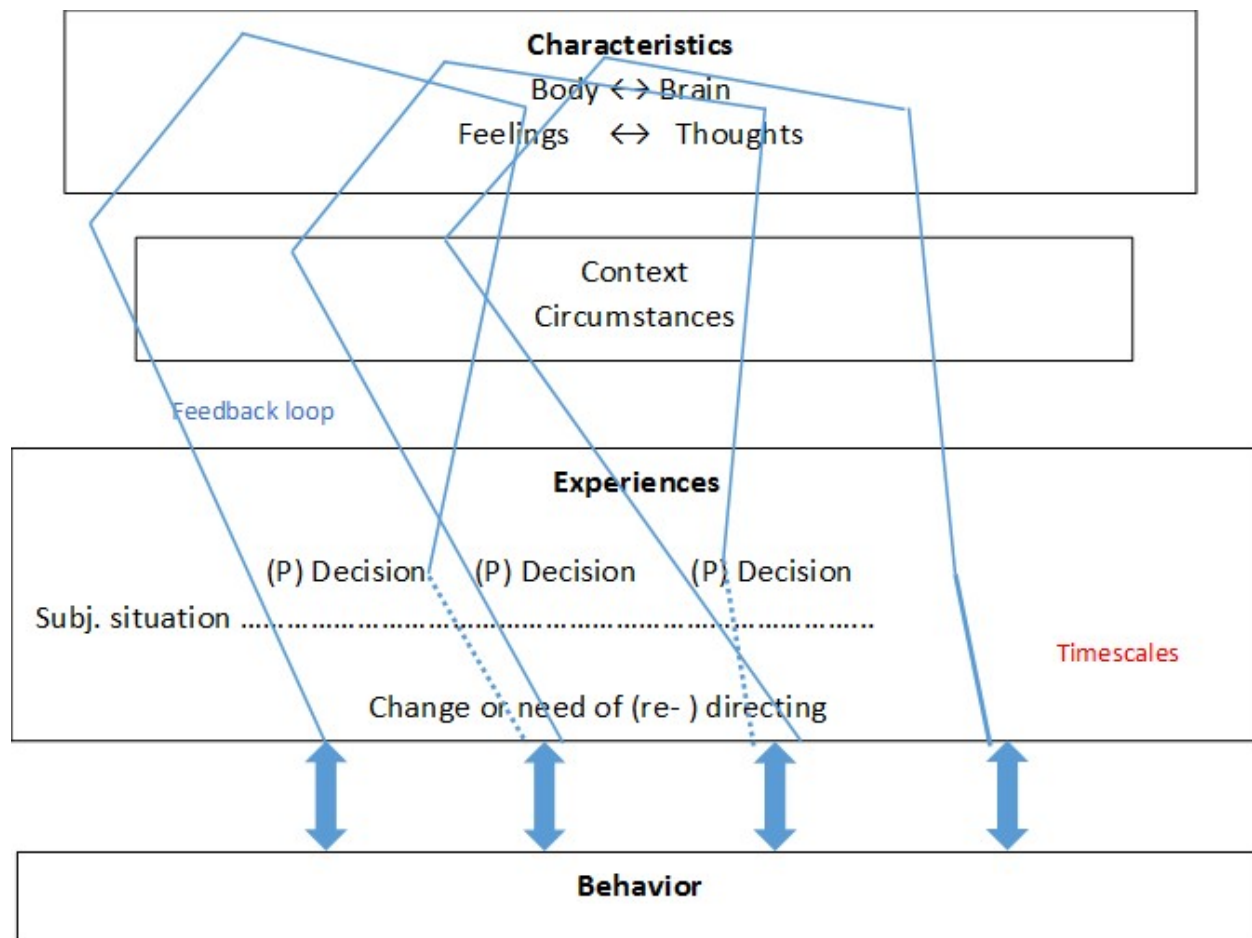
The aim of this section is to understand better the person in the situation as the individual who attempts to maintain behavioral balance. In the previous section, it was argued that behavioral decision-making is personal due to the mental processing of situational information via timescales and feedback loops. The individuality of maintaining behavioral balance agrees with the much-debated issue of the subjectivity in science. Again, because there are many studies about subjectivity in science, theoretically and empirically, I will bring forward only the broad outline via a few, recent reviews. Overall, the problem regarding subjectivity in science is that it encompasses personal perspectives, individual goals, deviation from the standards, and biased evaluations (Lundberg et al., 2023, p. 4511). In science, the presence of subjectivity can arise with the formulation of research questions derived from theory by either one or a limited group of scientists because the research questions and theory include these scientists' prior experiences and reasoning (Curtis, 2012). Next, the presence of subjectivity in science also entails the participants, each having their own opinions and interpretation of (experimental) situations. Taken together, these two kinds of subjectivity in science have led to some researchers expressing doubts about the existence of scientific objectivity, for instance, by psychologists, who criticized "the normalized behavior of particular groups (of white middle class people) and the issue of experimenter effect under the auspices of objective science" (Gough & Madill, 2012, p. 4). Doubts about the existence of scientific objectivity have led to proposing various methodological considerations, such as a reflexive scientific attitude (i.e., recognizing and working positively with subjectivity in the research process: e.g., Braun & Clarke, 2024; Gough & Madill, 2012; Jamieson et al., 2023; Minna et al., 2024) because most researchers agree that all kinds of subjectivity (e.g., researchers' perspectives regarding quantitative and qualitative research, qualitative research in itself, first-person report-based measures, and consensus-driven reassessments, such as intercoder and interrater procedures) can affect research results (e.g., Baise, 2020; Curtis, 2012; Levitt et al., 2022; Jimenez et al., 2024). Hence, from a data-analytical point of view, how can researchers obtain individual-specific data that informs about maintaining behavioral decision-making via timescales and feedback loops while accounting for subjectivity in the research process in scientifically appropriate manner?

First, how to come to understand the person in the situation in such a manner that it reflects individual-specific and actual-situation behavioral decision-making (i.e., the research question), and that it is measured reliably and valid (i.e., data collection for data analysis)? Where the focus of most person-situation research is on a certain degree of global individual-situational information that, for instance, can lead to inter-individual groups (e.g., see Van Velzen, 2024a, for person-specific intra-individual data), the present problem refers to measuring local individual-situational information that is useful for understanding a phenomenon (e.g., learning behavior) and process (e.g., the process of behavioral decision-making), and to enhance the replicability of the findings and results. That is, where global research questions refer to obtaining a generalized view regarding person-specific intra-individual information, local research

questions refer to obtaining further clarifications of person-specific intra-individual data across situations. For example, a global research question is “What kind of study techniques do you use for a specific school subject?” and the data collection includes intra-individual person-specific information that holds observations about personal characteristics, timescales, context, and circumstances separately (e.g., enabling separate four-quadrant displays: Van Velzen, 2024a). An example of a local research question is “When do you change your study techniques in an actual homework situation and for which reasons?” This latter kind of research question can enable researchers to obtain an understanding about the holistic interconnectedness of personal characteristics, timescales, context, and circumstances across time.

Second, how to describe theoretically, in the absence yet of scientific evidence, that all behavioral decision-making can be individual-specific due to timescales and feedback loops? Regarding timescales, their individual-specificity lies on the individual picking up certain features in the situation as a consequence of that individual’s personal characteristics (i.e., knowledge based on memorized experiences). Individuals in the same situation can differ in observing certain features from the situation. The intensity of focusing on certain situational features will feed the interpretation that the individual constructs about what is happening in the situation. Because the situation has objective (i.e., where all participating persons agree on) and subjective (i.e., individual-specific) features, the timescales that the individual works with and that are the basis for individual-specific behavioral decision-making, is a time-arranged and individual perspective-taking process to a certain degree. To a certain degree, because there is also the objective situation, which is less under the control of the individual’s perspective-taking process (see next section on cognitive control).

Regarding feedback loops, they enable an interconnection between information about the external situational environment and the individual’s personal internal environment. Feedback loops enable that previously interpreted information circle or remain activated within the individual’s mental processing (i.e., working memory) for the purpose of producing well-considered future output (i.e., reacting and behaving). To do so, the consequences of previous reactions and behavior and the changing external environmental situation are brought together mentally via several feedback loops, each enabling the mental re-evaluating of the external information in relation to internal information in a continuous process. Although the fluctuating and conflicting forces that an individual can encounter in the external environment require a wide range of human abilities to react to the situation (Kashdan, 2010), it can be expected that a primal basis for reacting to a wide range of situations is the decision of whether or not to employ habitual or preferred behavior (i.e., based on previous experiences) rather than having to be flexible by coming up with new kinds of alternative behavior (i.e., adapting to uncertain and unfamiliar situations). The reason to expect that the process of behavioral decision-making will consist of deciding on habitual versus alternative behavior is that this kind of decision is of vital importance to maintain behavioral balance (Lomas, 2021; Yildirim et al., 2022), in that the maintaining of behavioral balance can create a sense of security. Conversely, the advantage of using habitual behavior is that, because it has proven its worth in the past, it provides for mental processing space, whereas considering and trying out alternative behavior will take up extra mental processing time, which, especially in uncertain situations, is not what someone may want to do. Hence, feedback loops are essential to keep previous person-situational information in mind in order to increase the likelihood of finding suitable habitual behavior as soon as possible (see Figure 2).



*Figure 2.* Schematic presentation of the behavioral decision-making process for person-situation research studies (taken from Van Velzen, 2025).

Figure 2 shows how the individual, who makes decisions to maintain behavioral balance regarding the situation that he or she is in, can do so by varying between habitual and alternative behavioral options in line with the person that the individual is or prefers and believes to be (i.e., self-identity). Person characteristics are the person-specific individually experienced situational observations that have led to personalized knowledge that is stored in long-term memory and that includes who the person is and how he or she functions best. Person characteristics are unique individual characteristics that are open to change during someone's life (Harris et al., 2016). To make behavioral decisions, the individual works with continuous feedback loops to interpret parts of the actual situation in order to process or evaluate mentally what is happening. It is necessary that this feedback consist of *loops* in order to re-interpret and re-evaluate a situation because the actual situation cannot be observed and understood continuously by the individual due to the time required for the mental processing of information (i.e., the body-brain in the external environment in relation to the mind), and all of this has to agree with who the individual is (i.e., knowledge), but who is now in a particular (i.e., social-historic-cultural) context (i.e., to align one's knowledge with thoughts and emotions). Feedback loops also enable the individual to

direct attention to those situational features that can supplement previously obtained feedback information. Finally, not all feedback loops have to lead to a behavioral decision, because sometimes extra mental process time is required by a series of pre-decisional feedback loops (i.e., the dotted blue lines).

Third, with regard to the measurement of timescales and feedback loops for the behavioral decision-making process, this needs to account for individually constructed variables that can change across time in order to capture the changes across time. In this respect, Olschewski et al. (2024) argued that complex research subjects require extensive research into the cognitive processes, such as those that will be involved in behavioral decision-making. They argued that the basis of these cognitive processes is the way in which a person experiences the outcomes of behavioral decision-making and the value or weight that this person ascribes to the behavioral outcomes. In other words, the subjective interpretation of the situation becomes available to the person via feedback information that is received as a consequence of previously selected behavioral decisions (i.e., both acting and not acting), and how the person learns from it by constructing knowledge. Especially, the anticipated dynamics of a situation calls for flexibility in behavior that in turn requires a close connection between multiple cognitive processes and behavioral decision-making. Therefore, measuring behavioral decision-making via timescales and feedback loops has to refer to an actual situation rather than a research provided specified situational description, because these descriptions may not agree with the individual's situational experiences. For example, research provided specified situational descriptions (e.g., in items of questionnaires and surveys) can lead to unwanted thoughts when the participant is unfamiliar with the situational description, such as "Why specifically this situation, and what does the researcher want me to do with this situation that is only partly or not at all in line with my experiences?"

Fourth, longitudinal research designs have led to questioning the amount and time-duration of time scales (i.e., research specified) in order to enhance the possibility to detect patterns (Walls et al., 2012). However, when a study involves person-specific timescales, defined as person-intensive observation as proposed in Figure 2, then this can interfere with research specified time scales. For example, for both research specified time scales and person-specified timescales, they are imaginable as "a long wall with windows spaced along it . . . [and] the process can be observed (in detail) at the windows, but not between the windows," but only research specified time scales are "intensive designs that are capable of achieving a high level of granularity (i.e., the measurement burst designs:" Walls et al., 2012, p. 49). These intensive longitudinal research designs are characterized by having one or two observation time scales and the possibility of discontinuous change, for instance, by enabling disruptive events to take place. In this way, person-specific intra-individual variation and change across time can be revealed when the intensive longitudinal research design provides for the opportunity to observe for a specified period of time.

### **When and Why Is the One Behavior Employed Over the Other?**

The aim of this section is to understand better the when and why of the individual person in the situation who can decide on employing one behavior over the other for the purpose of maintaining behavioral balance. So far, it has been argued that the maintaining of behavioral balance consists of being capable to react flexibly based on the individual interpretation of the situation. Also, the interpretation of the

situation is individual to a certain degree, because there is also the objective situation or those perceived features of the situation that all persons present in the situation agree to. The research literature shows that the maintaining of behavioral balance is related to self-identity (see Hagger & Chatzisarantis, 2006; Verplanken & Orbell, 2019, for overviews) as a necessity for the person to function as a whole (Lomas, 2021; Yildirim et al., 2022) and cognitive control as knowing when someone can be flexible cognitively (see Braem & Egner, 2018; Bugg & Egner, 2021; Egner, 2014, for overviews).

Regarding self-identity, the theory of planned behavior (Ajzen, 1991) states that someone's intentions are strong predictors of actual behavior and these intentions are based on perceived personal, social, and control-related expectations and evaluations regarding behavioral outcomes. The theory of planned behavior has been found useful as a general framework for behavioral decision-making in terms of there being certain cognitive concepts that also can have an influence. One of these cognitive concepts is self-identity or the way in which a person perceives himself or herself (Sparks & Shepherd, 1992). For example, someone may see herself as a sporty person, whereas another person may see himself as an organized student who plans his study.

Self-identity may influence the behavioral decision-making process, although it is yet unknown whether or not this is so for all individuals rather than for some individuals. Also, it is yet not completely understood whether or not self-identity relates to certain behaviors, such as habitual and alternative behaviors, and whether or not people differ in the extent to which they find certain habits relevant for their self-identity (Verplanken & Orbell, 2022). In general, people prefer to resort to fairly stable habits because these habits have proved their benefits during previous experiences, and habits provide for automatic or less-effort requiring actions than the trying out of new, alternative actions do. However, the study of David et al. (2024) showed that even when habits are ineffective, namely students employing ineffective study techniques, the students did not feel compelled to change their learning habits if these habits enabled them to pass exams. Anyway, strongly favored habitual behavior can become a feature of someone's self-identity, such as employing healthy eating habits can become part of oneself as a healthy-eating individual.

Next, maintaining one's self-identity cannot be included in research studies without taking into account cognitive control. The research literature on behavioral decision-making includes research on human cognitive control, which is a core function of cognitive flexibility (i.e., quickly switching or reconfiguring the mind, such as shifting the focus from the color to the shape of clothes) next to inhibition and working memory (see Braem & Egner, 2018; Bugg & Egner, 2021; Egner, 2014, for overviews). At first, the focus of the study of cognitive control was restricted to the switching of learning tasks in the presence of stimuli or distractors via, for instance, attentional selectivity, conflict monitoring, and memory-driven control. Currently, the interest has changed towards the functioning of cognitive control: "How do we know when to be flexible [rather than habitual], and how much?" (Braem & Egner, 2018, p. 2). That is, the decision to switch between habitual and alternative behavior is a result of temporal environmental or contextual features in relation to memory of past behavior. The temporal context fosters expectations that mostly lead to consulting one's memory for appropriate habits. Overall, little is known yet about how humans link external stimulation to appropriate internal states and select appropriate behavioral actions because of the disparate research literature.

Regarding the study of human cognitive control in relation to behavioral decision-making to select either habitual or alternative actions, there are more questions than answers. For example, Braem and Egner (2018) showed that context-dependence is maintained actively via if-then rules to define the situation (i.e., task set) in order to guide current behavior. That is, is it correct to assume that cognitive control is a higher-order thinking process that requires if-then rules? If we want to make a call to our friend, do we then navigate some if-then rules to define the situation and are the if-then rules always goal related? Another assumption that the study of Braem and Egner (2018) revealed is that cognitive control functions are crucial for overriding habitual behavior, but it is yet unknown, for instance, whether this is feedback related. So far, research showed that rewards provide for positive affect and motivation to employ cognitive control for situation-appropriate behavior, and negative and no rewards provide for more switches in cognitive control than habitual behavior does (Mittelstädt et al., 2024), but the situation-specific features or situation-explicit cues and the feedback they can elicit have not yet been examined (Umemoto & Holroyd, 2015).

Another example is Bugg and Crump's (2012) questions regarding cognitive control and the way in which it is studied (e.g., the Stroop-conflict task of switching between the color of red and the meaning of red, and the associative memory-driven task). Although general evidence is obtained by employing these tasks, it remains unsure whether, for instance, the associations that are formed for these tasks involve the same learning processes and are established at the same rate. As a consequence, future research questions are, for instance, *when* cognitive flexibility is susceptible to its recent (repeated) learning history, whether it depends on experiencing conflict during situational observation, and whether it is a consequence of high demanding or complex environments. Overall, alternative interpretations of the evidence are possible when cognitive control is studied across different kinds of tasks (i.e., which situational features and control processes are incorporated in memory: Egner, 2014), and across individuals (Dignath et al., 2021) without taking into account the memorized event files in connection to different forms of control (Bugg & Crump, 2012), and having control of the context and interpretation of the temporal context (Egner, 2014).

## **Discussion: The Process of Behavioral Decision-Making**

The aim of this section is to discuss the proposed theory of the behavioral decision-making process for the study of person-situation research, in order to give a preliminary description as a guideline for data analysis. This section consists of three parts that will discuss (a) the three questions raised in this article, (b) the proposed schematic presentation of the process of behavioral decision-making, and (c) the consequences for exploratory data analysis that, eventually, can become the basis for longitudinal developmental research designs.

First, in this article, three questions were raised that yet do neither have a clear answer nor sufficient evidence because the evidence is mixed, but to get answers to these questions is considered to be essential because the individual who is reacting behaviorally does so as a consequence of the person reacting to the situation, which means that it highlights the individual-specific interpretation of the situation across time. To summarize the discussed questions, (a) a person most likely maintains behavioral balance by considering and deciding on certain preferred or habitual behaviors, but it will require alternative behaviors when the person finds that the

situation demands a reconsidering of one's knowledge, context, circumstances, and self-identity in order to adapt appropriately, (b) the individual-specificity in the maintaining of behavioral balance most likely consists of the interconnection between the person and the situation to maintain a continuation of appropriate behavior, which led to the two schematic presentations (i.e., figures 1 and 2) of the process of behavior decision-making for person-situation research as a means to study the variations in the function of behavior for individuals, (c) the individual employs either the one or the other behavior most likely by referring to oneself in the interpreted situation via the maintaining of self-identity, which may include the accounting for cognitive control.

Second, Figure 2 regarding the process of behavioral decision-making for person-situation research included (a) timescales as the person-specific indication of temporal window frames that consist of less to more intense observation of certain situational features (i.e., going from the objective to the subjective situation primarily directed by someone's knowledge-experience) and (b) feedback loops as person-specific decision-making by connecting one's self-identity to the interpretation of the context in relation to personal and situational circumstances (i.e., possibly consisting of values in terms of thresholds and degrees). It was expected theoretically that both (a) and (b) can lead to balanced behavioral decision-making (i.e., habits versus alternatives), in that patterns of behavioral change can be explained in terms of when and why certain personal decision-making arises in certain situations. The expected surplus value of Figure 2 is that when thresholds (i.e., the point or place where a new beginning takes off, such as a noticeable change in behavioral decision-making) and degrees (i.e., the intensity, slope, and grade of the comparative assessment criteria before the noticeable change in behavioral decision-making takes effect) can be observed, patterns may arise that can explain further inter-individual differences that are established via person-specific intra-individual characteristics (Van Velzen, 2024, 2024a). Measurement burst designs can be helpful, especially regarding explorative research, in terms of collecting a workable amount of variables.

Third, the consequences for data analysis. To study the behavioral decision-making process as proposed in this article will require at first, exploratory research because there are only theoretical assumptions, but no evidence. Nevertheless, the study of the behavior decision-making process will require a longitudinal or developmental research design (e.g., Van Velzen, 2020) because the behavioral decision-making process continues across time. Currently, multiple short measurement burst designs (Walls et al., 2012) are considered to be useful because exploratory studies not only have to discover the merits of a theoretical proposal, but also obtain knowledge about the kind of data collection (Van Velzen, 2025a) and data analysis that will be suitable for obtaining information regarding the proposed schematic presentation of the process of behavioral decision-making for the study of person and situation integration. For example, the four-quadrant data analysis (Van Velzen, 2024a) was found to be useful for the study of detecting inter-individual overall differences based on raw person-specific intra-individual data. Something similar may be the case for the study of detecting person-situation patterns in the process of a phenomenon based on individual-specific timescales in relation to aware and via feedback loop construed behavioral decisions.

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### Conflict of Interests

The author declares that the research was conducted in the absence of any commercial or financial relationship that could be construed as a potential conflict of interest.

### Citation

Van Velzen, J. H. (2025). Maintaining Behavioral Balance Because of Continuously Having to Readdress the Situation: Flexibility. *RRREaT – Data-Analytical Techniques, 1*: 01. Retrieved from <https://sigmetack.com>.

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