Planning to deliberate thoroughly: If-then planned deliberation increases the adjustment of decisions to newly available information ☆

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A B S T R A C T

Planning our actions in advance is an important means of action control and increases the likelihood of initiating intended actions at critical points in time (Gollwitzer, 1999; Gollwitzer & Oettingen, 2016). In the current research, we investigate whether planning to deliberate thoroughly can also increase the likelihood of deliberation when it is needed. As an increase in deliberation is often associated with more thorough use of available information, we predict that planning to deliberate causes people to adjust their current course of action more closely to newly available information. We test this prediction in three experiments in which the participants are faced with the decision to continue with or disengage from a chosen course of action after new information has become available. The first experiment uses an established escalation of commitment paradigm (Study 1); the second and third experiment use a more naturalistic task based on the card game of poker (Studies 2 & 3). In all three studies, planning to deliberate at a critical point in time by forming implementation intentions reduced the tendency to stick to a failing course of action, suggesting that plans to deliberate can be used to increase the likelihood of deliberation and thereby the effective processing of newly available information.

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Every gambler knows
That the secret to survivin'
Is knowin' what to throw away
And knowin' what to keep

[Kenny Rogers, The Gambler]

Knowing what to keep and what to throw away is not only important for gamblers. In our everyday life, we often face decisions of whether to continue a currently pursued course of action or whether to change or even stop it altogether. Such decisions are complicated by the fact that changing or stopping a currently pursued course of action often involves throwing away previous (time or money) investments – which people are usually hesitant to do. Furthermore, and most important for our current work, continuously changing information may make it hard to be prepared to make such a decision.

When relevant information is available, being prepared is easy as one can plan specific future actions in advance and thereby increase the likelihood of initiating the intended actions at critical points in time (Gollwitzer, 1993, 1999; Gollwitzer & Oettingen, 2016). However, such planning gets difficult if circumstances are expected to unpredictably change over time, calling for flexible decision making at a later critical situation. As some of us have suggested previously in a theoretical paper (Martiny-Huenger, Thürmer, Issa, & Gollwitzer, 2011), we hypothesize that it may be advantageous to plan to deliberate thoroughly when expecting to face critical, decision-requiring situations with an unpredictable information basis in order to prepare oneself for an informed and reflected future decision.

In our current research, we tested this idea of whether planning to deliberate influences subsequent decisions in a way that the decisions are better adjusted to critical information – information that was not available at the time of planning but became available only at a critical prospective situation. In the following, we will first introduce traditional action if-then planning and then introduce our idea of planning a deliberation process. Finally, we will provide the rationale for why we expect that in certain situations deliberating thoroughly will lead to more optimal decisions compared to more spontaneous, unprepared decisions.

1. If-then planning

Self-instructions in the form of if-then plans (e.g., "If I encounter situation S, then I will perform response R!") have proven to be an effective strategy to enhance goal striving (*implementation intentions*; Gollwitzer, 1999; Gollwitzer & Sheeran, 2006). A person forming an implementation intention identifies 1) a response with the potential to facilitate attaining a currently held goal, and 2) a critical situation (i.e., an opportunity or obstacle) in which the goal-directed response is to be initiated. Such if-then planning has been shown to increase the likelihood of actually initiating the intended response when the critical situation is encountered. This effect is assumed to be the consequence of at least two mechanisms. First, specifying the critical situation in the if-part of the plan results in a heightened mental accessibility of the critical situation (Achtziger, Bayer, & Gollwitzer, 2012; Parks-Stamm, Gollwitzer, & Oettingen, 2007; Webb & Sheeran, 2004; Wieber & Sassenberg, 2006) which leads to an increased likelihood of detecting it when it is encountered. Second, formulating an if-then plan creates a strong associative link between the critical situation and the goal-directed response (Bayer, Achtziger, Gollwitzer, & Moskowitz, 2009; Gollwitzer & Sheeran, 2006; Webb & Sheeran, 2004, 2007). By means of spreading activation, this link increases the likelihood that the response will be initiated when one faces the critical situation (see Gollwitzer, 2014, for an extended discussion of the mechanisms underlying if-then planning).

Typically, implementation intentions are used to prompt specific responses. Such specific responses can range from actual physical actions (e.g., pressing a button; Cohen, Bayer, Jaudas, & Gollwitzer, 2008) to purely cognitive responses (e.g., thinking of a word or a concept; Stewart & Payne, 2008). In the current research, we aim to go beyond such specific responses to test whether planning to deliberate thoroughly actually increases the likelihood of initiating deliberation in the specified prospective situation.

It is noteworthy that such plans to deliberate contain the same basic components as classic implementation intentions and thus their effects are likely to be a result of the same psychological processes. We understand deliberation as a cognitive response that needs to be initiated just like other cognitive responses (e.g., thinking of a certain word; Stewart & Payne, 2008). As the working of implementation intentions is said to be associated with automaticity, this may seem in conflict with engaging in deliberation, as reflecting pros and cons can be cognitively quite demanding. However, it is important to note that implementation intentions automate the initiation of the respective responses – after the initiation, they may have to run off controlled and effortful. In sum, it is not theoretically inappropriate to specify deliberation in the then-part of an implementation intention; just like other complex responses (e.g. speaking up to racist remarks; Gollwitzer & Brandstätter, 1997), deliberation can be expected to be initiated automatically and then pursued in a controlled and effortful manner.

To test this experimentally, we asked our participants to specify an open-ended deliberation in the then-component of their if-then plans rather than a specific response. As a testbed for our hypotheses we chose to use *escalation of commitment* task paradigms because in such tasks an optimal decision can only be made if information that was not available prior to the critical situation is successfully integrated. We will elaborate on this in the following section.

1.1. Information use in commitment bias problems

Once having themselves committed to a certain course of action (e.g., investing in a project), people do not like to make corrections, even if available feedback suggests that the current course of action is futile. This phenomenon is referred to as escalation of commitment (Staw, 1976) and it is known to occur in various contexts (e.g., with regard to personal, business, or political decisions; Sleesman, Conlon, McNamara, & Miles, 2012).

Self-justification and loss aversion are two important mechanisms that drive escalation of commitment. For example, after deciding on a certain course of action for a project, one is committed to this course. Receiving negative feedback on the project's progress may call for making a course correction. However, making such a correction involves admitting an error which conflicts with the need for self-consistency and self-justification. Changing one's course of action would imply either inconsistent choices and behavior or an unjustified commitment to the course of action in the first place (Bobocel & Meyer, 1994; Brockner, 1992). Furthermore, completely canceling a certain project because of a decreasing probability of a successful completion includes accepting the sure loss of already invested money and resources – another outcome that people are usually motivated to avoid (i.e., loss aversion; Soman, 2008). In sum, such motivations can lead people to quickly disregard and ignore negative progress information and continue with the previously chosen course of action (i.e., escalation of commitment; Sleesman et al., 2012).

We suggest that people can overcome this problem by applying a strategy that facilitates engaging in thorough deliberation at critical points in time. By "deliberation" we understand the investment of time and attention towards information processing regarding the task at hand, including feedback on goal progress. Many mechanisms that drive escalation of commitment (e.g., self-justification motives; Bobocel & Meyer, 1994; Brockner, 1992; and loss aversion; Soman, 2008) are working against processing available relevant feedback. For example, the motivation to avoid a sure loss drives the continuation of a project despite clear indications that the project is failing. Respecting relevant feedback information in the form of critical, verbal or numeric information requires time and effort directed towards the negative feedback (Birnboim, 2003). It has been shown in a recent meta-analysis that an analytic thinking style (i.e., deliberation) can be beneficial for goal attainment if the context requires thorough information processing (Phillips, Fletcher, Marks, & Hine, 2016). As we expect engaging in thorough deliberation to provide the necessary time and effort, we hypothesize an increased consideration of such feedback during deliberation – which in turn should reduce the influence of other feedback-independent mechanisms (such as self-justification motives).

So far, we have elaborated how deliberation may be instigated at critical points in time via if-then planning. Furthermore, we provided an argument why deliberation at a critical point in time (e.g., when new feedback information becomes available) may decrease the tendency to show escalation of commitment. In the final section before presenting our experiments, we will summarize prior research combining if-then planning and escalation of commitment paradigms to highlight how our current research goes beyond these studies to expand our understanding of how to improve decision making by planning.

1.2. If-then planning and escalation of commitment

Henderson, Gollwitzer, and Oettingen (2007) have shown that implementation intentions help to disengage from a failing course of action by triggering the evaluation of one's current course of action. In one of their experiments, participants had to take a test in which different strategies could be used to answer as many knowledge questions as possible. Before the test, participants were instructed to form either an action implementation intention that specified a concrete response to potential negative feedback ("If I receive disappointing feedback, then I'll switch to another strategy!"), or evaluate the effectiveness of the chosen strategy ("If I receive disappointing feedback, then I'll think about how things have been going with my strategy!"). Participants answered knowledge related questions and received immediate (bogus) feedback about their performance after completing each item. Depending on the experimental condition, this feedback pointed to an increase or a decrease in performance. After having finished a given block of questions, the participants additionally received a summarized (bogus) feedback suggesting either good or poor performance.