The Effect of Choice on Intention-Behavior Consistency

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Gillholm, R., Erdeus, J., & Gärling, T. The effect of choice on intention-behavior consistency. Göteborg Psychological Reports, 1996, 26, No. 9. Three studies were conducted with the aim of investigating whether choice of behavioral alternative increases intention-behavior consistency. In Study 1 undergraduates were asked to write and mail back an essay on a topic they either chose or were assigned. Demonstrating an effect of choice, significantly more subjects who chose an essay topic mailed back the essays. These subjects also rated their intention to write the essay as stronger, thus suggesting that the difference between choice and no choice is that the intention is self-generated. Supporting this interpretation, no differences in mail-back rates were observed in Studies 2 and 3 between a difficult and easy choice condition. Furthermore, an alternative hypothesis that choice induces implementation intentions did not receive support since independent effects were found in Study 2 of deciding when and where to write the essay and in Study 3 of making an outline of the essay.

Key words: Intention, goals, behavior, choice set, decision making, planning, commitment

The degree that attitudes are related to behavior, or attitude-behavior consistency, has been the focus of much research (Dawes & Smith, 1985). As noted by Zanna and Fazio (1982), the first generation of this research investigated if such a relation existed. Since the relation did not prove to be straightforward, the focus changed to the investigation of possible moderating factors (see, for example, Ajzen & Fishbein, 1973; Borgida & Campbell, 1982; Davidson & Jaccard, 1979; Wicker, 1969). More recently the focus has again changed to how intentions are implemented in behavior or intention-behavior consistency (Karoly, 1993; Brandstätter & Gollwitzer, 1994).

Fishbein and Ajzen’s (1975; Ajzen & Fishbein, 1977, 1980) theory of reasoned action (TRA) has over the years received strong empirical support (Sheppard, Hartwick, & Warshaw, 1988). Nevertheless, several attempts have been made to improve its predictability, either by adding new variables or by making changes

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to its internal structure (Bagozzi, 1992). In the former category falls Ajzen’s theory of planned behavior (TPB) where perceived behavioral control is included as a measure of people’s confidence in their ability to perform the behavior.

By measuring perceived behavioral control it is possible to extend the boundary conditions of TRA to behaviors that are not under complete volitional control. Empirically it has been shown that measurements of perceived behavioral control improve both predictions of intention from attitude and subjective norm and predictions of behavior from intention (Ajzen 1991; Gärling, 1992; Netemeyer, Burton, & Johnston, 1991; Schifter & Ajzen, 1985). However, it is important to note that perceived behavioral control has a direct influence on intention only, whereas the influence on behavior stems from the actual control a person exerts (Ajzen, 1985). If perceived behavioral control improves the prediction of behavior, this implies that perceived and actual behavioral control are correlated. Such a correlation may exist if, for instance, a low degree of perceived behavioral control motivates successful attempts at increasing actual behavioral control. An important research task is to clarify the means by which actual control over behavior is increased.

A limitation of attitude theories such as TRA and TPB is that they do not specify the relation between intention and behavior. Since only a moderate correlation exists between the strength of people’s intentions and their actual behavior (Sheppard et al., 1988), attention needs to be given to identifying factors that influence the intention-behavior relation. TRA and TPB do not include such factors. In these theories intention strength is the only direct predictor of behavior.

If a distinction is made between the strength of an intention and its structure, it may be argued that not only the former but also the latter would predict behavior. However, while measuring intention is straightforward (e.g., by means of ratings of how strongly one intends to perform a behavior), operationalizing its structure is more complicated. There are several different structural aspects of an intention that may be important. Examples of such aspects include: how the intention is represented in memory (e.g., if memory is time or event based, Einstein & McDaniel, 1996); cognitive orientation (e.g., the distinction between state and action orientation, Kuhl, 1987); deliberative and implemental mind-sets (Gollwitzer, 1990); or whether the intention is self-generated or externally generated (Latham & Locke, 1991; Schunk, 1989).

A structural aspect with implications for the intention-behavior consistency is the degree to which an intention is planned. German will psychologists (e.g., Narsis Ach and Kurt Lewin) distinguished between motivation and volition (Brandstätter & Gollwitzer, 1994; Gollwitzer, 1990). Motivation refers to the initial choice to pursue a goal, while volition refers to the actual pursuit of the goal. With this distinction in mind, Heckhausen and Gollwitzer (1987) proposed the Rubicon model in which it is assumed that goal achievement is governed by two qualitatively different types of intentions: goal and implementation intention. A person with a goal intention is committed to pursue a certain goal; however, having such an intention does not guarantee that the goal is achieved.
The person also has to decide about routes to implementation. Such decisions concern how, when, and where to perform the behavior.

Gollwitzer (1993) conducted an experiment to investigate the assumed positive effects of forming an implementation intention. He asked students to write an essay about their Christmas break within two days after Christmas and mail it back to the experimenter. Half of the subjects were induced to form an implementation intention by specifying time and place for writing the essay, while the other half did not have to specify this. The results showed that 73% of the subjects in the implementation-intention condition returned the written essays while only 23% did in the goal-intention condition. Thus, the results clearly supported the hypothesis that forming an implementation intention increases the likelihood of achieving a goal.

These results were recently replicated and extended by Gillholm, Ettema, Selart, and Gärling (1996). After having read an excerpt from a novel, subjects were asked to fill out and mail back a mood adjective checklist. Subjects who were asked to indicate where, when, and which other activities they would perform on the same day mailed back the checklist more frequently than subjects who were not asked to indicate this. The mail-back rate for subjects who only stated place and time fell in between. This suggests that some degree of coordination with other intentions further increase the intention-behavior consistency.

Studies of the intention-behavior relation have primarily been concerned with the intention to perform single behaviors. However, in real life people commonly face a choice between alternative behaviors. In such cases people may be more deliberate about how to implement the behaviors, in particular if they need to be coordinated. As a result, in line with Gillholm et al. (1996) and Gollwitzer (1993) the intention-behavior consistency should increase. In an extensive meta-analysis by Sheppard et al. (1988), it was in fact found that the correlation between intention and behavior increased in studies that involved a choice between different behaviors as compared to studies where no such choice was involved. Although suggestive, possible confounding factors may, however, prevent a straightforward interpretation of these results. For instance, Pieters and Verplanken (1995) investigated intentions to vote for a particular candidate in a national election. Among other things they measured the size of subjects' effective choice set, confidence in their intention, and intention-behavior consistency. Contrary to the findings of Sheppard et al. (1988), the results supported Pieters and Verplanken's hypothesis that a larger choice set would lead to a lower degree of consistency. A problem of interpreting these results is that the self-report measure of size of choice set simply reflects the degree of subjective confidence in the intention.

If it is assumed that choosing between behavior alternatives makes subjects form an implementation intention (Gollwitzer, 1993; Gillholm et al., 1996), the likelihood of performing the chosen behavioral alternative is expected to increase. The purpose of Study 1 was to demonstrate in a single controlled study that the effect of choice is in this expected direction. Briefly, in a place and at a time they themselves selected, subjects were asked to write an essay and then to mail it back to the experimenter. Half of the subjects could choose the topic of the essay, whereas the other half of subjects were assigned the topic.
In Studies 2 and 3 an attempt was made to determine whether choices increase the likelihood that subjects form an implementation intention. Subjects were again asked to write an essay. All subjects could choose between different topics; however, for half of the subjects the choice was nominal in that only one topic was interesting to them, whereas the other half of the subjects effectively made a choice since all topics were about equally interesting. In addition, subjects in both groups were treated as in Gillholm et al. (1996), that is, one third of them were also asked to indicate when and where they intended to write the essay, one third to indicate this as well as which other activities they intended to perform on the same day, and the final one third to do none of these. In Study 3 half of the subjects in the effective and nominal choice conditions were asked to make an outline of the essay when they chose a topic and the other half of the subjects not asked to do this. In both studies it was expected that when the choice of topic was difficult, inducing subjects to form an implementation intention would not increase the intention-behavior consistency since they had already formed such an intention. In contrast, when the choice was nominal, inducing subjects to form an implementation intention was expected to increase intention-behavior consistency.

Study 1

In their meta-analysis Sheppard et al. (1988) demonstrated a higher intention-behavior consistency when subjects choose between behavioral alternatives than when they do not. However, many factors which were uncontrolled may account for the observed effect of making a choice. Therefore, there is a need to show in a single study that choices increase the intention-behavior consistency before attempting any interpretation of the effect of choice. This was done in Study 1 in which subjects who were asked to write essays either chose or were assigned a topic. The dependent variable was whether or not subjects mailed back the essay.

Method

Subjects. Twenty eight male and 12 female undergraduates at Göteborg University participated in return for payment. Equal numbers of subjects were randomly assigned to a choice condition and an assignment condition with sex approximately balanced.

Procedure. The experimenter informed students in three psychology classes about an ongoing study of how creative thinking affects mood. They were told that the task involved filling out a mood adjective check list immediately after writing a short essay. Subjects were further informed that they would have to work for at least 30 minutes in some quiet place during one of the following three days. Anonymity was guaranteed. An average of 50% of the students signed up for the study. They received a two-page questionnaire which they
completed. In addition subjects were given a sealed envelope to take away. The envelope contained the mood adjective check list and additional instructions.

The front page of the questionnaire repeated the information about the study which had previously been given orally. It was thus again stressed that subjects had to work with the essay for at least 30 minutes in a quiet place where they would not be interrupted. Subjects were asked to not open the sealed envelope until they were sure they could perform the task as required.

On the second page of the questionnaire the essay topics were presented. Subjects in the choice condition were asked to choose between three topics, while in the assignment condition approximately equally many subjects were randomly assigned each of these topics. The three topics had been pretested so that they were about equally attractive and likely to be chosen. In the assignment condition, the topics were "The importance of living in societies," "Threats and possibilities of increasing computer usage," and "Punishment or treatment: Which way to go in the penal system?".

After reading the essay topics subjects were asked additional questions about their task. They answered these questions by checking numerical scales ranging from 1 to 7 with verbal definitions of each endpoint. A question asked only to the choice group concerned how difficult it was to make the choice of essay topic. The endpoints were defined as "not difficult at all" and "very difficult." The other five questions asked all subjects concerned (1) how interesting the essay topic was (endpoints "not interesting at all" and "very interesting"), (2) perceived importance of writing the essay ("not important at all" and "very important"), (3) priority ascribed to writing the essay ("not high at all" and "very high"), (4) perceived likelihood of writing the essay ("not likely at all" and "very likely") and (5) how motivated subjects felt to write the essay ("not motivated at all" and "very motivated").

The sealed envelopes contained the same instructions given twice earlier. Subjects were also requested to once again rate priority ascribed to writing the essay, perceived importance of writing the essay, and how motivated they felt to write the essay.

One or two weeks after the recruiting phase, the experimenter a second time approached subjects in class. A post-experimental questionnaire was then distributed. After having answered this questionnaire, subjects were debriefed and paid.

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**Results and Discussion**

As Table 1 shows, in the choice condition the different topics were chosen about equally often and there were small nonreliable differences compared to the assignment condition, $\chi^2(2) = 0.44$, $p>.25$. A 2 (choice vs. assignment) by 3 (essay topic) analysis of variance (ANOVA) on the ratings of interest in the essay topics did not reveal any significant effects ($F$s<1). The ratings of interest in the essay topics were on average above the midpoint on the scales (see Table 2). A mean rating of 4.4 ($s=1.96$) of difficulty of choosing essay topic obtained from subjects in the choice condition indicated that their choice was difficult. Thus, these
aspects of the results suggested that the pretest was successful in selecting essay topics which were about equally interesting.

A significant difference in the expected direction was observed in that 14 (70%) subjects in the choice condition and 7 (35%) in the assignment condition mailed back the essays, $\chi^2(1) = 4.9, p<.05$. In order to investigate whether choosing an essay topic also led to an increased intention strength, a mean was calculated across the ratings of priority, importance, likelihood, and motivation. A reliability analysis of this composite measure showed that Cronbach’s $\alpha$ was .81. Choice of essay topic tended to lead to a stronger intention ($M=4.6, s=1.0$) than did assignment ($M=4.0, s=1.1$), $t_{(38)} = 1.83, p<.10$. Furthermore, no differences

Table 1
Number of Subjects in Each Condition that were Assigned or Chose the Essay Topics

<table>
<thead>
<tr>
<th>Essay topic</th>
<th>Computers</th>
<th>Penal system</th>
<th>Society</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment</td>
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<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Choice</td>
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<td>6</td>
<td>8</td>
</tr>
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Table 2
Mean Ratings of Interest in the Essay Topics

<table>
<thead>
<tr>
<th>Essay topic</th>
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<th>Penal system</th>
<th>Society</th>
</tr>
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<tbody>
<tr>
<td>M</td>
<td>s</td>
<td>M</td>
<td>s</td>
</tr>
<tr>
<td>Assignment</td>
<td>4.3</td>
<td>0.8</td>
<td>4.1</td>
</tr>
<tr>
<td>Choice</td>
<td>4.2</td>
<td>1.2</td>
<td>4.2</td>
</tr>
</tbody>
</table>
(essay topic) mixed factorial ANOVA performed on the means across the three scales yielded no significant effects ($F < 1$). Thus, the intentions of those subjects who mailed back written essays remained strong irrespective of whether they chose or were assigned an essay topic.

It may be asked whether a difference in intention strength between those subjects who made choices and those who did not reflects a higher degree of commitment in the ones who did. Indirect evidence for such an interpretation is provided by findings suggesting that people are more committed to self-generated than to externally generated goals (Latham & Locke, 1991; Schunk, 1989). To investigate whether intention alone accounts for the effect of choice, a hierarchical linear regression analysis was performed in which the mean across intention scales was entered before condition (choice vs. assignment). The results yielded a significant beta coefficient for intention strength ($0.37$, $t(1, 39) = 2.42$, $p < .05$) but also a marginally significant increase of $R^2$ from .13 to .20, $F(1, 38) = 3.32$, $p < .10$, when choice condition was entered in the next step. Thus, there may be some effect of choice on intention-behavior consistency over and above an increased intention strength.

Study 2

Study 1 demonstrated in a single study that choices increase intention-behavior consistency. This is in agreement with the results of the meta-analysis performed by Sheppard et al. (1988). However, although the results clearly showed that subjects in the choice condition more often mailed back the essays, the reasons for this are still unclear. A difference in intention strength was found to account for most of the effect of making a choice.

Making a choice among behavior alternatives may lead to a higher commitment to perform the chosen behavior because the intention is self-generated (Latham & Locke, 1991; Schunk, 1989). In Study 2 subjects made choices in all conditions although the choice sets were varied to make the choices more or less difficult to make. If no effect of choice set is obtained, it would be consistent with the conclusion that self-generating an intention is the important reason why choices increase intention-behavior consistency.

If the choice is difficult subjects may be less confident in their intention than if the choice is easy. Therefore, in line with the findings of Pieters and Verplanken (1995), one may expect a lower intention-behavior consistency. However, a difficult choice may also force subjects to more thoroughly process information about the alternatives, entailing perhaps mental simulations of the different alternatives. Such mental simulations (Hayes-Roth & Hayes-Roth, 1979) are likely to involve tentative choices of when, where, and how to perform the behavior. In line with the results of Gillholm et al. (1996) and Gollwitzer

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1Similar analyses were also performed in each of the subsequent studies with similar negative results.

2A logistic regression analysis yielded comparable results.
the intention-behavior consistency should therefore be expected to increase. Both subjects whose choices were easy and those whose choices were difficult were treated as in Gillholm et al. (1996), that is, one third of them were asked to indicate when and where they intended to write the essay, one third to indicate this as well as which other activities they intended to perform, and the final one third to do none of these. If subjects who make difficult choices form implementation intentions to a higher degree than those who make easy choices, a stronger effect of these manipulations should be expected in the latter than in the former group.

Method

Subjects. Another 34 male and 86 female undergraduates at Göteborg University participated in return for payment. About 50% of the students in five psychology classes visited agreed to participate. Equal numbers of subjects were randomly assigned to six different conditions with sex approximately balanced.

Procedure. The procedure was the same as in Study 1 except for the following differences.

All subjects were asked to choose an essay topic from among three alternatives. Half of them (effective-choice condition) were given the same topics as in Study 1. For the other half (nominal-choice condition) the choice was nominal since in addition to one of the essay topics presented in the other condition, two others were included which in pretests were never chosen. These additional topics were "The fauna of Bohuslän (the name of the local area)" and "Industrial breakthroughs in agriculture." After having made their choice, subjects in both conditions rated how difficult the choice was on a 7-point scale. Ratings were also made of intention strength, likelihood, motivation, and how fun writing the essay was. All these ratings except likelihood were repeated when subjects opened the sealed envelope.

Treatment conditions for one third of the subjects in both choice conditions were exactly the same as in the choice condition of Study 1. Subjects in these groups were expected to form a goal intention but no implementation intention. Another one third of the subjects were asked to provide information about where and when they intended to write the essay. They were led to believe that this information was essential for assigning subjects to different conditions when investigating mood effects. Subjects in these groups were supposed to form an implementation intention. Such an intention was expected to be formed even more frequently or firmly by a final one third of the subjects who were also asked to write down all the other activities they planned to do on the same day.

Results and Discussion
In the nominal-choice condition all subjects, except two who were replaced, chose the essay topics which were presented to subjects in the effective-choice condition. In the latter condition 18 subjects chose the computer topic, 21 the penal system topic, and 21 the society topic. Across the goal, implementation, and plan conditions, the choices of essay topics were approximately equally distributed. $\chi^2$-tests in each condition were not significant ($p > .25$). The mean ratings of interest in the topics were above the midpoint on the scales (Table 3). A 2 (nominal vs. effective choice) by 3 (goal intention vs. implementation intention vs. plan) by 3 (essay topic) ANOVA did not yield any significant effect of essay topic or interactions involving this factor. Unexpectedly, the main effect of intention condition reached significance, $F(2, 102) = 4.22, p < .05$, as well as its interaction with choice condition, $F(2, 102) = 3.95, p < .05$. Bonferroni corrected $t$-tests showed at $p = .05$ that the mean ratings by subjects in the plan condition were reliably lower than in the implementation and goal conditions. While these differences were significant in the nominal-choice condition, they were not in the effective-choice condition. A parallel ANOVA on the ratings of difficulty of choosing essay topic revealed the expected main effect of choice condition ($M = 3.8, s = 0.2$, for effective choice; $M = 2.8, s = 0.2$, for nominal choice), $F(2, 102) = 10.13, p < .01$.

Table 3

<table>
<thead>
<tr>
<th>Essay topic</th>
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<th>Penalties</th>
<th>Society</th>
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<tbody>
<tr>
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<td>$M$</td>
<td>$s$</td>
<td>$M$</td>
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<td></td>
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<tr>
<td>Plan</td>
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<td>1.0</td>
<td>4.4</td>
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</table>

Table 4 shows the number of subjects in each group that mailed back the essays. In contrast to the results of Study 1, the difference due to choice
condition is much lower and did not reach significance in the goal, implementation, and plan conditions, $\chi^2(1) = 1.76$, $\chi^2(1) = 0.14$, and $\chi^2(1) = 0.90$, $p>.10$, respectively. Thus, the effect of choice on intention-behavior consistency is probably due to a stronger intention resulting from that it is self-generated, consistent with Latham and Locke (1991). In accordance with previous results (Gollwitzer, 1993), when an implementation intention is formed, the intention-behavior consistency increases reliably as compared to when only a goal intention is formed, $\chi^2(2)= 8.60$, $p<.05$. However, in contrast to what Gillholm et al. (1996) found, there is no further increase in intention-behavior consistency in the planning condition. Furthermore, the effect of implementation intention and planning was not found only in the nominal-choice condition.

### Table 4

<table>
<thead>
<tr>
<th>Conditions</th>
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<th>Plan</th>
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<td>11</td>
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<tr>
<td>Effective-choice</td>
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</table>

In further support of the conclusion that choice increases intention strength because the intention is self-generated, no differences between choice conditions were found for means across the ratings of priority, likelihood, and intention strength (Cronbach’s $\alpha = 0.77$). A 2 (nominal vs. effective choice) by 3 (goal intention vs. implementation intention vs. plan) by 3 (essay topic) ANOVA did not yield any significant effect of choice condition ($M=5.2$, $s=1.2$, for nominal choice; $M=5.2$, $s=1.03$, for effective choice).

As predicted, deciding where and when to write the essay had a positive effect on the intention-behavior consistency. However, the fact that fewer written essays were mailed back in the plan condition was not expected. It should be noted that in this condition, subjects were less interested in the chosen essay topic. A possible explanation is that the task of listing intended activities overtaxed subjects in this condition, yielding more negative attitudes towards writing the essay. An additional parallel ANOVA on the ratings of how fun subjects anticipated it would be to write the essay yielded a significant effect of intention condition ($M=4.3$, $s=1.3$, in the goal condition; $M=4.3$, $s=1.4$, in the implementation-intention condition; and $M=3.4$, $s=1.3$, in the plan condition), $F(2, 102) = 5.80$, $p<.01$. Bonferroni corrected $t$-tests at $p=.05$ showed that subjects were reliably less positive in the plan condition. A related possibility is that these subjects became stressed when reminded of other intended activities and thus developed a more negative attitude to the essay-writing task.
In Studies 1 and 2 subjects were, as in Gollwitzer (1993), asked to write essays. In contrast, in Gillholm et al. (1996) the subjects’ task was to read an excerpt from a novel. In all of these studies an implementation intention was induced by asking subjects to decide when and where to perform the task. However, when writing an essay making an outline is another component of planning, perhaps more important than deciding on place and time. Furthermore, if a choice between essay topics is difficult, that subjects outline the essay as part of the deliberation process preceding the choice seems as likely as that they think of when and where to write the essay. Thus, a remaining possibility is that choosing an essay topic increases intention-behavior consistency because such choices entail making an outline of the essay to be written.

No effect of choice was obtained in Study 2 where difficult choices were compared to easy choices rather than as in Study 1 where choices were compared to no choices. If these results are replicated in Study 3, making an outline of the essay cannot account for the effect of choice. However, it was also of interest to find out whether or not making an outline increases intention-behavior consistency. Exactly like in Study 2, half of the subjects made actual choices of essay topics whereas the other half made nominal choices. In addition, half of the subjects in each choice (effective vs. nominal choice) condition was required to make an outline of the essay, the other half not required to do that.

Method

Subjects. Nineteen male and 54 female undergraduates recruited from Göteborg University and a nearby community college participated in return for payment. About 50% of the students in five behavioral-science classes visited agreed to participate. Equal numbers of subjects were randomly assigned to four different conditions with sex approximately balanced.

Procedure. The procedure was essentially the same as in Study 2. The main difference was that in each choice condition half of the subjects was required to make an outline of the essay after having chosen topic. More specifically, subjects were asked to write down ideas about what to write on the chosen topic. Subjects listed each idea on a separate line so that they would be easy to count.
Results and Discussion

In the nominal-choice condition subjects chose the essay topics which were presented to subjects in the effective-choice condition. In the latter condition 11 subjects chose to write about the computer topic, 12 about the penal system topic, and the remaining 13 about the society topic. Across the intention conditions, the choices of essay topics were approximately equally distributed. $\chi^2$-tests in each condition were not significant ($p > .25$). Furthermore, subjects who made an outline wrote down approximately the same number of ideas in both choice conditions ($M = 2.11$, $s = 2.25$, in the nominal-choice condition; $M = 1.92$, $s = 2.17$ in the effective-choice condition). A $t$-test showed that the difference was not significant ($p > .25$).

The mean ratings of interest in the topics are given in Table 5. As may be seen, the means were above the midpoint on the scales. A 2 (nominal vs. effective choice) by 2 (outline vs. no outline) by 3 (essay topic) ANOVA did not yield any significant effect of essay topic or interactions involving this factor ($p > .05$). A parallel ANOVA on the ratings of difficulty of choosing essay topic revealed the expected main effect of choice condition ($M = 3.5$, $s = 1.1$, for effective choice; $M = 2.5$, $s = 1.2$, for nominal choice), $F(1, 60) = 11.20$, $p < 0.001$, suggesting that the choice manipulation was successful.

Table 5
Mean Ratings of Interest in the Essay Topics

<table>
<thead>
<tr>
<th>Essay topic</th>
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<th>Penal system</th>
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<th>Society</th>
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<tr>
<td>Effective-choice</td>
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</tr>
<tr>
<td>Outline</td>
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<td>5.6</td>
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<td>0.9</td>
<td>5.5</td>
<td>1.3</td>
<td>5.2</td>
</tr>
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</table>

Table 6 shows the number of subjects in each group who mailed back the essays. As in Study 2, the effect of choice was weak and nonsignificant, $\chi^2(1) =$
0.52, \( p > 0.25 \). Thus, since no effect of difficulty of the choice was found, the explanation of the effect of choice on intention-behavior consistency may still be that the intention is self-generated. Only a nearly significant increase in mail-back rate was observed of forming an implementation intention, \( \chi^2(1) = 2.83, p < 0.10 \). Thus, the effect of making an outline did not seem to be stronger than deciding on time and place. In addition, it only tended to have an effect when the choices were difficult.

Table 6

<table>
<thead>
<tr>
<th></th>
<th>No outline</th>
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</thead>
<tbody>
<tr>
<td>Nominal-choice</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Effective-choice</td>
<td>8</td>
<td>15</td>
</tr>
</tbody>
</table>

A 2 (nominal vs. effective choice) by 2 (goal intention vs. implementation intention) by 3 (essay topic) ANOVA was performed on the means across the ratings of motivation, likelihood, and intention (Cronbach’s \( \alpha = 0.78 \)). As in Study 2 the ANOVA did not yield any significant effects of choice condition (\( M=5.2, s=0.8 \), for nominal choice; \( M=5.4, s=1.2 \), for effective choice), \( F<1 \), corroborating the conclusion that the effect of choice is to increase intention strength. However, a significant effect of intention condition was found. The mean for subjects who made an outline was reliably larger than for those who did not make an outline (\( M=5.6, s=1.0 \), for outline; \( M=5.0, s=0.9 \), for no outline), \( F(1, 60) = 5.82, p < 0.05 \), suggesting that making an outline made subjects feel more committed to writing the essay. To investigate whether intention strength accounted for the effect of making an outline, a hierarchical regression analysis was performed in which intention strength was entered in the first step. This resulted in a \( R^2 \) of 0.14, \( F(1, 70) = 7.14, p < 0.05 \). No significant increase of \( R^2 \) of making an outline was found.

**General Discussion**

The present results have implications for the understanding of how choice affects intention-behavior consistency as well as the role planning plays. A main conclusion is that the effects of choice are unrelated to those of planning. In Study 1 it was shown that subjects who were given the opportunity to choose essay topic completed the task of writing and mail back an essay more frequently than those who were assigned a topic. It was further shown that there were no differences between the conditions concerning subjects’ rated interest in
the topics, suggesting that the observed effects of choice was not solely a consequence of the opportunity for the choice groups to choose the topic they thought was more interesting. However, the two groups differed in rated intention strength. Thus, the difference in intention-behavior consistency was perhaps the result of a difference in intention strength.

In Study 2 an attempt was made to replicate the results of Study 1, controlling for the possibility that the differences in intention-behavior consistency obtained in Study 1 were due to the fact that subjects who chose topic became more committed to the chosen alternative (Latham & Locke, 1991; Schunk, 1989). Subjects in a control group were given a choice of essay topics as subjects in the experimental group were. However, except for one, the topics were pretested to be so unattractive that the subjects would not consider to choose them. In this case, the choice neither produced an effect on intention strength or performance. This indicates that the effect of choice on intention-behavior consistency, as demonstrated by Sheppard et al.'s (1988) meta analysis, may be due to subjects' commitment to a chosen alternative.

The role of planning for intention-behavior consistency was also investigated in Study 2. According to Gollwitzer (1993), a goal intention is characterized by the adoption of a goal or end-state and an implementation intention by decisions about when and where to perform a goal-directed behavior. The latter was induced by asking subjects to indicate when and where they would write the essay. The importance of coordinating different intentions or behaviors was also assessed by asking subjects to list other intended activities (Gillholm et al., 1996). As hypothesized, a difference concerning performance between the goal-intention and implementation-intention conditions was observed. This difference was independent of whether subjects made an actual choice or not. Thus, it effectively refutes that the effect of choice in Study 1 was due to increased planning. However, the hypothesized difference in performance between the plan condition and the other conditions was absent. Rather, a difference in the opposite direction was found, that is, fewer subjects in the plan condition than in the implementation-intention condition mailed back the essays. This unexpected difference was also found in subjects' ratings of the fun they anticipated from writing the essay and of their interest in doing it. Apparently, something made subjects in the plan condition evaluate the essay-writing task more negatively than subjects in the other conditions and this may account for the difference opposite to the expected one.

Study 3 investigated the role making an outline of the essay played for intention-behavior consistency. The results showed that making an outline increased subjects' intention strength and that the effect on intention-behavior consistency was accounted for by this increase. The other type of planning investigated in Study 2 failed to show an effect on intention strength. Although additional research is needed to corroborate the finding, a tentative conclusion may be drawn about the different nature of these two types of planning tasks. The implementation-intention framework developed by Gollwitzer (1993) stresses how implementation intentions increase the intention-behavior relationship because forming such intentions pass the control of the implementation to the situation. However, making an outline may be similar to rehearsing a particular behavior out of its context. The actual control over the
performance may still increase although perhaps less than if it had been (mentally or actually) practiced in the actual situation. On the other hand, it does not seem unlikely that having invested effort and time in rehearsal leads to a stronger commitment to perform the behavior.

The self-regulating functions of the different planning components may thus be different. Kuhl’s (1987) distinction between structural and dynamic aspects of intentions appears related to this. The structural aspects reflect the actual plan, or as Kvavilashvili and Ellis (1996) puts it, the ”what or how side” of intentions. The dynamic aspects is not concerned with the plan per se, but with the feeling of commitment towards the plan, or the ”that side”. While forming an implementation intention presumably primarily would lead to a more specific structure of a plan (i.e., by specifying when and where to perform a behavior), rehearsing a behavior would be more related to the dynamic aspect.

References


