In studies examining the influence of recall on judgments, social psychologists have generally concentrated on the content of recalled material rather than on the process of recall. To investigate the impact of recalled behaviors (content) and the ease with which these behaviors came to mind (process) on assessment of one's own assertiveness, 158 West German students were asked to describe either six (easy recall) or twelve (difficult recall) examples of their own assertive or non-assertive behaviors. To manipulate the distinctiveness of the recall, subjects were told the task would or would not be difficult. On the basis of the availability heuristic it was assumed that subjects in the difficult recall conditions would assess themselves as being less assertive (or non-assertive) than subjects in the easy recall condition, despite the larger number of recalled behaviors. Results clearly supported this prediction, suggesting that the ease with which examples could be brought to mind was used as an informational basis for evaluating personal attributes. Results also supported Bem's (1982) self-perception theory by demonstrating that individuals infer their personality characteristics from the content of behavioral information they recall, as well as the ease with which those behaviors come to mind. (Author/JAC)
Recalled Behavior and Ease of Recall
as Information in Self-Assessment

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Abstract

To manipulate content and ease of recall, subjects were asked to describe either six ("easy") or twelve ("difficult") examples of either assertive or non-assertive behaviors. On the basis of the availability heuristic it was assumed that subjects in the difficult recall conditions would assess themselves as being less assertive (or non-assertive) than subjects in the easy recall conditions—despite the larger number of recalled behaviors. The results clearly support this prediction, suggesting that the ease with which examples could be brought to mind was used as an informational basis for evaluating one's own personal attributes.
Recalled Behavior and Ease of Recall as Information in Self-Assessment

Tversky and Kahneman's work on the availability heuristic has had a long and profound influence on research in social psychology (cf. Nisbett & Ross, 1980). Although the concept of availability has instigated an enormous number of studies, its meaning has deviated from the original definition of this judgmental heuristic. While Tversky & Kahneman (1973) focused on the process of recall or reconstruction (the "ease with which x can be brought to mind"), social psychologists have mainly concentrated on contents whose impact on judgments was facilitated by availability. Recent criticism (Taylor, 1982) has highlighted the danger of triviality potentially associated with the latter definition because "one's judgments are always based on what comes to mind" (p. 199, emphasis ours).

In addition to varying what can easily be remembered, the present study concentrates on how difficult it is to recall x. Specifically, we investigated the impact of recalled behaviors (content) and the ease with which these behaviors come to mind (process) on assessments of a personality characteristic, namely one's own assertiveness. To vary the content of subjects' recall, part of the subjects had to report assertive behaviors while others had to report non-assertive behaviors they had engaged in. To manipulate the perceived ease of recall half of the subjects in each condition were asked to report six examples (which was found to be easy in a pretest) while the others were asked to provide twelve examples (which was found to be difficult). If subjects' judgments are primarily based on the content they recall, subjects should attribute themselves higher assertiveness when they recalled assertive rather than non-assertive behaviors and this difference should be more pronounced when many rather than few examples were recalled. On the other hand, if subjects use the ease of recall as additional information subjects who recalled only six behaviors but found that task easy should attribute themselves more extreme traits than subjects who recalled twelve examples but found that task difficult - despite
the fact that the latter recalled more behaviors.

A final experimental variation was the "distinctiveness" of the recall process. That is, the informational value of the ease of recall should be greater when it is perceived to be of high rather than low distinctiveness. The experience that it is difficult to generate twelve examples should be less diagnostic for one's own attribute when everybody is assumed to share this experience than when this experience is unique to oneself.

These possibilities were explored in the present study using a 2 (assertive vs. non-assertive) x 2 ("easy" vs. "difficult") x 2 (high vs. low distinctiveness)-factorial design.

Method

158 students of a West German teachers' college were asked to participate in the construction of an Assertiveness Inventory. To do so, subjects were asked to provide either six (easy recall) or twelve (difficult recall) examples of their own assertive or non-assertive behaviors. To manipulate the distinctiveness of recall, half of the subjects in each condition were informed that the task should not provide any difficulties and that pretest subjects found it easy to provide the requested number of examples, while the remaining subjects were informed that the task might be difficult and that pretest subjects found it hard to complete the examples.

Finally, subjects were told that a future goal of our research project would be the development of an assertiveness training and were asked to answer five questions related to this intention. On nine-point bipolar scales these questions assessed whether the subjects considered themselves assertive, whether they wanted to be more assertive, whether they felt an assertiveness training might be useful to them, etc. The summary score of five questions (Cronbach's alpha = .72) was used as the main dependant variable. In addition, subjects rated the difficulty of providing the requested examples (9 = very difficult).
Table 1 shows subjects' self-reported assertiveness as a function of the experimental variables; higher scores indicate higher assertiveness. As predicted, subjects who had to recall six examples (easy recall conditions) reported higher assertiveness when they described assertive ($M = 25.8$) rather than non-assertive behaviors ($M = 23.7$). On the other hand, subjects who had to recall twelve examples (difficult recall conditions) reported higher assertiveness when they recalled non-assertive ($M = 26.5$) rather than assertive behaviors ($M = 23.5$), as depicted in Figure 1. This crossover pattern is confirmed by a significant interaction of content of recall and ease of recall, $F(1,142) = 6.35$, $p < .02$. Moreover, no main effect for content emerged ($F < 1$), contrary to the classic predictions of self-perception theory (Bem, 1972).

These results demonstrate that subjects used the ease of retrieval as information in making self-attributions, resulting for example in attributions of lower assertiveness when recalling assertive behaviors was difficult rather than easy - despite the larger number of assertive behaviors recalled in the "difficult" condition.

Finally, the interaction of content and ease of recall was expected to be more pronounced when the experienced ease of recall was of high rather than low distinctiveness. Analysis of variance did not support this hypothesis, $F < 1$ for the triple interaction.

Correlational analyses. The interpretation that subjects' self-assessment of assertiveness was mediated by the ease with which examples came to mind is supported by correlational analyses using subjects' self-reported ease of recall. Specifically, subjects who recalled non-assertive behaviors reported higher assertiveness the more difficult they found the task to complete $r = 32$, $p < .002$. On the other hand, subjects who reported assertive behaviors reported less assertiveness the more difficult they found the task, $r = -.12$, $p = .15$, and both correlations differ significantly from one another, $z = 2.77$, $p < .003$. Moreover, the actual number of behaviors recalled was uncorrelated with reported assertiveness ($r$'s = -.01 and -.07 for assertive and non-assertive conditions, respectively).
Self-persuasion. An alternative explanation required additional analyses. To the extent that recalling many examples is difficult, the representativeness of the recalled examples might decrease the more examples subjects report. If subjects base their self-assessments on the more recently recalled examples this, rather than difficulty of retrieval, may account for the results. To test this hypothesis the representativeness of the last two examples provided by five randomly selected subjects in each condition was rated by two independent judges (1 = very assertive, 11 = very non-assertive). Inter-rater reliability was high ($r = .92$) and examples of assertive behaviors ($M = 2.4$) differed reliably from examples of non-assertive behaviors ($M = 9.2$), $F(1,32) = 663.0, p < .001$. Moreover, the last two examples given by subjects who had to report many examples were better exemplars of the type of behavior recalled ($M's = 2.6$ for assertive, and $9.7$ for non-assertive behaviors, resp.) than the last two examples given by subjects who had to recall few examples ($M's = 2.2$ for assertive, and $8.7$ for non-assertive behaviors, resp.), $F(1,32) = 6.27, p < .02$ for the interaction.

Thus, while differences in the quality of recalled behavior did emerge, these differences are opposite to those found in subjects' judgments, lending no support to the hypothesis that subjects' judgments were mediated by differential content rather than ease of retrieval.

Discussion

The present results support the gist of Bem's (1982) self-perception theory by demonstrating that individuals infer their personality characteristics from behavioral information they recall. However, the results also demonstrate that the content of recall is not the only source of information. Rather, the process of remembering provides additional information, namely the ease with which behaviors come to mind. Thus, subjects who had to recall a number of assertive behaviors small enough to make recall easy reported higher assertiveness than subjects who had to recall many examples, making retrieval difficult. That
is, the latter subjects inferred lower assertiveness despite describing more assertive behaviors. Similarly, subjects reported higher assertiveness when they had to describe many rather than a few non-assertive behaviors. In both cases, difficulties in recalling the appropriate number of behaviors resulted in inferences in a direction opposite to that implied by the recalled behaviors, indicating that process generated information was overriding content information. Thus, the present findings strongly emphasize that there is more to availability than "what comes to mind" (Taylor, 1982, p. 199).

While the obtained results are in line with an "ease of recall"-interpretation, one might also argue that they are due to subjects' difficulties in attaining the goals set by the experimenter, rather than to the ease with which examples came to mind. That the suggested distinctiveness of ease of recall had no effect on subjects' self-assessments (F < 1), however, renders this possibility unlikely. Specifically, if subjects used the goal set by the experimenter as a standard against which to evaluate their performance, the impact of that standard should have depended on subjects' assumptions about others' meeting or not meeting the standard. This was not the case, suggesting that subjects used their vivid experience of ease of recall rather than pallid external comparisons in evaluating their assertiveness.

Finally, some applied implications of the present research deserve consideration. In the area of cognitive therapy it is frequently suggested that clients complaining about a skill deficit be asked to provide counterexamples, that is, behaviors demonstrating the skill they assume missing (e.g., Mandel et al., 1971). To the extent that clients find it difficult to recall such examples, which is often the case, the present research suggests that this procedure might bolster their belief in their deficits, rendering the approach counterproductive. The present analysis suggests an opposite approach. That is, asking clients to recall a large number of behaviors illustrating their deficit might induce clients to infer that their deficiency is less severe than assumed. This remains to be tested in clinical studies.
References


Table 1

Judgments of Assertiveness

<table>
<thead>
<tr>
<th>Distinctiveness of ease of recall</th>
<th>Ease of Recall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Easy</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Recalled behaviors</td>
<td></td>
</tr>
<tr>
<td>Assertive</td>
<td>25.5</td>
</tr>
<tr>
<td>Non-Assertive</td>
<td>25.0</td>
</tr>
</tbody>
</table>

Note. Possible range of values is 5 to 45, higher values indicate higher assertiveness, N's are 18 to 20 per cell.
Figure 1

Assertiveness as a Function of Recalled Behaviors and Ease of Recall

Recalled Behaviors:
- Assertive
- Non-Assertive