

**Inferring ability from blame:
effects of effort- versus liking-oriented cognitive schemata**

WULF-UWE MEYER¹, RAINER REISENZEIN², OLIVER DICKHÄUSER³

Abstract

Numerous studies have found that blame for failure can have a „seemingly paradoxical“ effect on ability attributions. This effect consists in the inference that the blaming person estimates the blamed person’s ability as high. In a recent study this effect could no longer be replicated for the total group of subjects, but occurred only for a subgroup, whereas the remaining subjects showed an opposed attributional pattern. Empirical evidence is furnished that the subjects showing versus not showing the paradoxical effect used different causal schemas for the interpretation of teacher blame for failure. These schemas were based on the perceived estimate by the teacher of the blamed student’s effort, versus on his perceived liking vs. dislike for the student, respectively.

Key words: ability, attribution, blame, schema, social perception, teacher-student-interaction

¹ Wulf-Uwe Meyer, Universität Bielefeld, Abteilung Psychologie, Postfach 100131, D-33501 Bielefeld, Germany; E-mail: wulf-uwe.meyer@uni-giessen.de

² Rainer Reisenzein, Universität Greifswald, Institut für Psychologie, Franz-Mehring-Str. 47, D-17487 Greifswald, Germany

³ Oliver Dickhäuser, Universität Gießen, FB06-Psychologie, Otto-Behaghel-Str. 10 F, D-35392 Gießen, Germany

The studies reported in this article are aimed at documenting the operation of different causal knowledge structures in a domain that is undoubtedly of high educational relevance, namely, the interpretation of (verbal utterances of) *blame*. The motivation for this research was a recent failure to document a well-replicated result of earlier studies (see Meyer, 1992), namely that, under certain conditions, adults infer from blame for failure that the evaluator views the blamed person as having high ability. In the Introduction, we first give a brief summary of previous research on this topic and then outline the rationale of our studies.

Previous Research on the Interpretation of Blame

Blame (criticism) is a social event that is frequently analyzed from a reinforcement perspective. This perspective suggests that criticism decreases the probability of behavior upon which it is made contingent (e.g., O’Leary & O’Leary, 1972). In addition, blame is often believed to lead to negative affect in the recipients and to decrease their self-esteem. However, although blame or criticism undoubtedly *can* have these effects, it need not necessarily have them. There is evidence which documents that, at least in adolescents and adults, blame for failure can have unintended effects that appear paradoxical when considered from a reinforcement perspective (for a summary, see Meyer, 1992). Specifically, *blame*, particularly when given for failure at relatively difficult tasks, can lead to an inference of high ability, whereas *praise*, particularly when given for success at relatively easy tasks, can lead the praised person (as well as observers) to infer that the praising person evaluates the praised person’s ability as low. These „seemingly paradoxical“ effects were first demonstrated in a study by Meyer, Bachmann, Biermann, Hempelmann, Plöger, and Spiller (1979) and were subsequently replicated by numerous authors in both Germany (e.g., Blickle, 1990; Blickle & Groeben, 1988; Groeben & Blickle, 1988; Meyer, Mittag, & Engler, 1986; Möller, 1999; Reisenzein, Debler, & Siemer, 1992a, b) and the United States (e.g., Barker & Graham, 1987; Graham, 1990; Hom, 1991; Miller & Hom, 1997; Miller, Hom, McDowell, & Gionfriddo, 1989; see also Horn, 1985). Most of this research used a hypothetical scenario technique, but the effects have been replicated with videotaped scenes (e.g., Barker & Graham, 1987), as well as in realistic experimental situations (e.g., Meyer, Engler, & Mittag, 1982; Meyer et al., 1986).

To explain these paradoxical effects of praise and blame, Meyer (1982, 1992; Meyer et al., 1979) has appealed to a particular causal knowledge structure that is presumably used by (adult) people to interpret evaluative feedback from others. This causal knowledge structure, which we will call the „effort schema“ (*E-schema*), incorporates two major kinds of beliefs concerning the causes of blame: the evaluative principle, and the compensatory principle. The *evaluative principle* refers to implicit knowledge about the relation between effort as a cause of failure on the one hand, and blame on the other hand (e.g., Lanzetta & Hannah, 1969; Weiner & Kukla, 1970; for a summary, see Weiner, 1986): Blame is more pronounced, the more an achievement outcome is ascribed by the evaluating person to low effort. The *compensatory principle* refers to implicit knowledge about the degree of effort that – depending on the person’s level of ability – is necessary or sufficient for success on tasks of varying difficulty (see Heider, 1958; Kukla, 1972, Meyer, 1973). In difficult tasks, both high ability and high effort are regarded as necessary for success. Therefore, in these tasks, low ability cannot be compensated by high effort.

On the basis of these two beliefs, one can infer, from an evaluation and the context in which it occurs, how the evaluator views the ability of the blamed person (for a detailed discussion, see Meyer, 1992). Specifically, using the evaluative principle, blame for failure permits the inference that the provider of blame attributed the outcome to low effort. And low effort is seen as a decisive cause of failure particularly when the actor's ability is sufficiently high for the task at hand (for low ability would lead to failure no matter how much effort was expended). Therefore, blame for failure, especially at difficult tasks, permits the blamed person (as well as observers) to conclude that the blaming person estimates the ability of the blamed person as high.¹

However, in a series of recently conducted experiments, we were no longer able to replicate the paradoxical effect of blame at the group level (see Meyer, Reisenzein, Dickhäuser, Blitz, Brämer, Krone & Reich, 1997, for details). Rather, in these studies, the person receiving neutral feedback after failure was rated *higher* in ability than the blamed person. However, at about the same time, Möller (1999) again reported clear evidence for the paradoxical effect of blame (the blamed person was rated higher in ability). These divergent results cannot be explained by differences in subjects or design. In both cases, German university students served as subjects and the design of the studies was nearly identical to that of the original study by Meyer et al. (1979, Experiment 3). However, Möller (1999) used somewhat different verbal utterances of blame than Meyer et al. (1997). Whereas Meyer et al. (1997) used exactly the same utterance as Meyer et al. (1979, Experiment 3: „What have you done there! 35 is not correct.“) the formulation used in Möller's study was „Well, that was not that good.“. These different formulations may have led subjects in the two studies to attribute teacher blame to different causes.

Objectives of the Present Research

The most plausible explanation of the divergent results is, we think, that the majority of the subjects in both studies used different interpretative schemata to draw ability inferences from blame. When paradoxical effects of blame occur, subjects use the *E-schema* described above. When these effects do not occur and the person receiving neutral feedback is rated higher in ability, subjects use a *liking-oriented* schema (*L-schema*). This schema is characterized by the following beliefs: (1) Blame for failure is due to the teacher's dislike of the student. (2) The reason for this dislike is that the student causes problems due to consistently low performance. (3) Consistently low academic performance is usually caused by lack of ability. Assuming that the majority of the subjects in the studies by Meyer et al. (1997) used the L-schema to interpret teacher blame for failure, they should have inferred low ability (and low effort) from teacher blame, which was of course exactly what was found.

To test this explanation – that the E-schema leads to the usual paradoxical effects of blame, whereas the L-schema has opposite effects – two new studies were conducted. In Study 1, the use of the E- or L-schema by subgroups of the participants was assessed by means of a questionnaire. In Study 2, we attempted to experimentally manipulate stimulus information in such a way that either the E-schema or the L-schema would be activated (cf. Sedikides & Anderson, 1992; Fiedler, 1982).

STUDY 1

The participants rated a scenario describing two students who failed at a difficult task. One of the students was blamed by a teacher for his performance, whereas the other student received neutral feedback. Subjects indicated how the teacher had assessed the ability of both students. In addition to the ability ratings, the participants were asked to answer six questions. One question served as a manipulation check of communicated teacher feedback (blame vs. neutral reaction) and two others (teacher anger; teacher's consoling) were included for exploratory purposes. The remaining three questions were constructed to obtain evidence for the use of the postulated E- and L-schema for inferring ability from blame for failure. These questions concerned (a) the presumed liking of the teacher for the two students, (b) the teacher's usual blaming of the two students, and (c) the teacher's surprise about the students' performance.

The following predictions were made. Subjects who use the *L-schema* for inferring ability from blame (and, therefore, rate the neutral feedback student as higher in ability), will – compared to subjects using the *E-schema* – more likely infer (a) that the student receiving neutral feedback is liked better by the teacher; and (b) that the teacher usually criticizes the blamed student more (because the L-schema also contains the belief that the blamed student shows *consistently* low performance). Furthermore, subjects who use the *E-schema* (and, therefore, rate the blamed student as higher in ability), will – compared to subjects using the *L-schema* – more likely infer that the teacher is surprised about the failure of the blamed student, because failure of a high ability (= blamed) student is more unexpected than failure of a low ability (= neutral feedback) student.

Method

Subjects

The subjects were 106 participants of an introductory psychology course at the University of Bielefeld, Germany, who were asked to complete a two-page questionnaire at the beginning of a class hour (62 female, 22 male; 22 did not indicate their sex and age; *M* age = 25.5). One subject was excluded from the data analyses because she answered only one of the eight questions.

Procedure

The subjects received a sheet describing the following situation:

„During class the teacher writes an arithmetic problem on the blackboard. The problem is so difficult that only few students are able to solve it. The students are given a bit of time to think about the problem and to write the solution down in their notebooks. After all students have written down their solution, the teacher takes a look at the notebooks of Walter and Heinz. Both have written down the wrong solution to this very difficult arithmetic problem.“

Immediately following this portrayal, the teacher feedback was described: „The teacher says to *Walter*: No, 35 is not correct. The teacher says to *Heinz*: What have you done there! 35 is not correct!“.

Subjects then indicated, for each of the two students, on separate 9-point scales how the teacher in their opinion evaluated the student's ability. The corresponding questions were:

„How does the teacher in your opinion evaluate the ability of Walter (or: Heinz)?“. The ability rating scale consisted of 9 slashes, five of which were labeled „very low ability“, „low ability“, „average ability“, „high ability“, and „very high ability“.

The subjects were then asked to answer six additional questions that were listed at the back of the questionnaire sheet. The questions and corresponding response alternatives were as follows: (1) Which student does the teacher want to blame with his utterance? (Walter, Heinz, both, none). (2) About whose performance is the teacher more angry? (Walter, Heinz, equally angry about both). (3) Whom does the teacher want to console with his utterance? (Walter, Heinz, none). (4) About whose performance is the teacher more surprised? (Walter, Heinz, equally surprised about both). (5) Who does the teacher like better? (Walter, Heinz, likes both equally). (6) Who does the teacher usually blame more? (Walter, Heinz, blames both equally).

Results

The mean ability ratings for the student who was blamed and for the student who received neutral feedback were, respectively, 5.08 and 4.72, $t(104) = 1.20$, *ns*. Hence, the paradoxical effect of blame was again not replicated at the group level.

To test our assumptions concerning the causal schema responsible for this attributional pattern, the subjects were divided into two groups: Those who showed the „paradoxical blame“ effect, i.e. who rated the blamed student as higher in ability than the student receiving neutral feedback ($n = 57$); and those who did not show the paradoxical blame effect, i.e. either judged the latter student as higher in ability than the blamed one ($n = 44$), or both students as equally able ($n = 4$). Because we assumed that the first group used the E-schema to infer ability from blame and the second group the L-schema, we henceforth refer to the first group as the „E-schema“ group and to the second one as the „L-schema“ group.

We then examined, first, whether these two groups differed with regard to their responses to the additional questions asked on the back of the questionnaire. With regard to the manipulation check question (Which student does the teacher want to blame?), there was no significant difference: The majority of the members from both groups (E-schema, L-schema) indicated that the teacher wanted to criticize the blamed student with his utterance (79%, 79%). No significant group differences were also obtained for one of the two exploratory questions: The majority of the members from both groups indicated that the teacher wanted to console none of the students (67%, 63%). With regard to the other exploratory question concerning teacher anger, there was a significant but only small difference between the two groups: 95% of the „E-schema“ group and 83% of the „L-schema“ group thought that the teacher was more angry about the blamed student's performance, $\chi^2[N = 104, df = 2] = 6.51$, $p < .05$.

In contrast, with regard to the remaining three questions, which were intended to provide evidence that the two postulated schemata were used by the two groups for the interpretation of blame, pronounced differences were found (see Table 1). (1) In the „L-schema“ group, the vast majority of the subjects believed that the teacher *liked the student receiving neutral feedback better* than the blamed student; whereas in the „E-schema“ group, slightly more than half of the subjects believed that the teacher liked the blamed student better than the student receiving neutral feedback, $\chi^2[N = 103, df = 2] = 43.46$, $p < .001$. (2) In the „L-

schema“ group, the vast majority believed that the blamed student was the one *usually more blamed* by the teacher; whereas in the „E-schema“ group, slightly more than half of the subjects believed that the teacher usually criticized the student receiving neutral feedback more than the blamed student, $\chi^2[N = 104, df = 2] = 37.64, p < .001$. (3) In the „E-schema“ group, nearly all subjects believed that the teacher was more *surprised* about the performance of the blamed student, whereas in the „L-schema“ group, teacher surprise was distributed about equally across the student receiving neutral feedback and the blamed student, $\chi^2[N = 105, df = 2] = 32.52, p < .001$.

In an additional data analysis step, we tried to *predict* the subjects' group membership (E-schema, L-schema) from their responses to the questions asking for teacher surprise, teacher liking, and usual teacher blame. For this purpose, the original three-step nominal scale variables were first transformed into two binary dummy variables each, which served as predictors in a discriminant analysis; the criterion was the group membership variable. Correct classification was possible for 83.8% of the cases (87.7% of the „E-schema“ group and 79.2% of the „L-schema“ group).

Table 1:
Response Distributions (Percent) for three Questions in the L-schema and E-schema Groups

	L-schema	E-schema
Better liked		
Neutral	83	18
Blamed	11	53
Both equally	6	29
Usually blamed		
Neutral	11	57
Blamed	83	23
Both equally	6	20
More surprised		
Neutral	40	2
Blamed	46	98
Both equally	14	0

Discussion

As in the studies by Meyer et al. (1997), there was again no paradoxical effect of blame evident at the group level. Slightly more than half (54%) of the subjects made a paradoxical blame attribution, whereas the rest showed an opposed attributional pattern.

It was hypothesized that these differences in attributional patterns were due to the use of different causal knowledge structures, the E-schema versus the L-schema, by the two subgroups of subjects. Supporting this hypothesis, there were substantial differences between the two groups in their answers to the questions concerning teacher liking, usual teacher blame, and teacher surprise. Looking first at the „L-schema“ group, the predicted response preferences were most clearly evident with regard to the first two of these questions: The large

majority of the subjects of this group believed that the teacher liked the student receiving neutral feedback (N) better than the blamed student (B) and that the teacher usually blamed B more than N. This response pattern is in agreement with our hypothesis that, in this group, dislike is regarded as the main reason for teacher blame for failure (and liking as the main reason for lack of blame): (1) The teacher blames B for his low performance because he dislikes B. (2) The reason for his dislike is that B usually shows low performance. This interpretation is supported by the finding that the large majority of subjects in the L-schema group believed that B is usually blamed more than N. (3) Because B generally shows low performance, he is, in the eyes of the teacher, a student with comparatively low ability.

The inference of high ability for the student receiving neutral feedback seems to have proceeded in an analogous manner as follows: (1) The teacher does not blame N for his low performance because he likes N. (2) The teacher likes N because N typically shows high performance (this is confirmed by the low proportion of subjects believing that N usually is blamed). (3) Because N usually shows high performance, the teacher regards him as a student possessing comparatively high ability.

Turning now to the „*E-schema*“ group (i.e., the „paradoxical blame interpretation“ group), we found, in line with predictions, that somewhat more than half of the subjects of this group believed that the teacher liked B better than N. Also, in agreement with predictions, a very clear response preference was evident in this group for the question concerning teacher surprise: With the exception of one subject, all members of this group indicated that the teacher was more surprised about B’s performance than about that of N. Apparently, then, the subjects in this group assumed that the teacher had expected a better performance from B. This is in agreement with the attributional model described in the Introduction: The teacher regarded B as being capable of showing a better performance and thought that he had not shown it only because of insufficient effort.

STUDY 2

In Study 2, we attempted to experimentally manipulate the stimulus information in such a way that either the E-schema or the L-schema would be activated. For this purpose, the same scenario was used as in Study 1, but the subjects received additional information concerning the teacher’s liking for the two students. Three experimental conditions were compared. The subjects in the first experimental group were informed that the teacher liked both students equally well (condition „BN equally liked“); the second group was informed that the teacher liked the blamed student better (condition „B better liked“); and the third group was informed that the teacher liked the student receiving neutral feedback better than the blamed student (condition „N better liked“).

We hypothesized that, as a result of these manipulations, in the first two conditions differences in teacher liking for the two students would be ruled out by the subjects as possible reasons for differential teacher feedback (blame vs. neutral feedback). In the third condition, however, such liking differences would be suggested to the subjects as the reason for the differential feedback (for the teacher blamed precisely that student whom he liked less). To predict the effects of these manipulations on ability judgments, we made the additional assumption that those subjects who spontaneously (that is, without additional information) use the L-schema for the interpretation of the teacher’s feedback, still have available the alterna-

tive E-schema; and vice versa for those subjects who spontaneously use the E-schema. Based on this assumption, we predicted that which one of the two schemata is actually used in a concrete situation for the interpretation of blame would depend on the specific information available in this situation. Specifically, we predicted that, because the L-schema cannot be used in the „BN equally liked“ and „B better liked“ conditions, the E-schema would be used instead. As a consequence, a paradoxical effect of blame for failure should be observed in these conditions. In contrast, in the condition „N better liked“, we expected that the L-schema would be activated with all, or at least with the greater majority of the subjects. Therefore, in this condition, the student receiving neutral feedback should be rated as higher in ability.

Method

Subjects

The subjects were 75 participants of an introductory psychology course at the University of Bielefeld, Germany, who were asked to complete a two-page questionnaire at the beginning of a class hour (47 female, 22 male; 6 did not indicate their sex and age; *M* age = 24.8).

Design and Materials

The scenario (two students fail at a difficult task) and the scales for assessing ability judgments were identical to those of Study 1. The three experimental conditions were characterized by different additional information concerning the teacher's liking for the blamed (B) and the neutrally treated (N) student. In the „BN equally liked“ condition, the subjects were informed: „The teacher likes both students equally well“. In the „B better liked“ condition, they were informed: „The teacher likes Heinz (the blamed student) better than Walter“. Finally, in the „N better liked“ condition, they were informed: „The teacher likes Walter (the student receiving neutral feedback) better than Heinz“.

Following the ability ratings of both students, the subjects had to answer eight additional questions that were listed at the back of the sheet. The first six questions were identical to those used in Study 1, with the fifth question (Who does the teacher like better? Walter, Heinz, likes both equally) serving as a manipulation check. The two additional questions were: „Who does usually show better performance in class? (Walter, Heinz, neither)“ and „Which of the two students attracts more negative notice during class? (Walter, Heinz, both equally)“.

Results and Discussion

Manipulation check

The control question (Who does the teacher like better?) was not answered by one subject, and 14 more gave an answer that did not agree with the experimental manipulation. These 15 subjects were excluded from the subsequent analyses. Interestingly, only 2 of the 14 subjects for whom the experimental manipulation was unsuccessful stemmed from the „N better liked“ group (that is, that condition in which the teacher feedback and the indicated teacher liking agreed with the postulated L-schema); the remaining 12 subjects came from

the other two conditions, in which such a match was not present. Directly opposing the explicitly given information, nine of these 12 subjects indicated that the teacher liked the student receiving neutral feedback better than the blamed one; without exception, these nine subjects also believed that the teacher viewed the student receiving neutral feedback as possessing higher ability than the blamed one (6.00 vs. 2.56). This finding suggests that the L-schema was so strongly engraved in some subjects that they preferred to ignore or discard conflicting information to a dissociation from this schema. Hence, our assumption that subjects who spontaneously use the L-schema still have the E-schema available for use was only partly correct.

Ability ratings

The mean ability ratings for the two students in the three experimental conditions are summarized in Table 2. In agreement with our hypotheses, the blamed student was rated as higher in ability than the student receiving neutral feedback in the conditions „BN equally liked“ and „B better liked“ – that is, precisely in those conditions where the additional information given was intended to prevent the use of the L-schema (94% and 72% of the subjects in these conditions, respectively, rated B higher in ability than N). In contrast, in the „N better liked“ condition, in which the additional information was intended to promote the use of the L-schema, the blamed student was, as predicted, rated lower in ability by the vast majority of the subjects (91%). This pattern of results was reflected in a two-way ANOVA in a significant interaction between the between-subjects factor teacher liking and the within-subjects factor teacher feedback (neutral vs. blame), $F(2, 57) = 27.83, p < .001$. Separate *t*-tests of the mean ability ratings for the blamed student and that receiving neutral feedback revealed significant differences within each condition ($ts > 3.20, ps < .01$). In addition, there was a significant main effect of the teacher liking factor, $F(2, 57) = 7.23, p < .01$. The main effect of the feedback factor was not significant ($F < 1$).

Table 2:
Mean Ability Ratings for the Blamed Student (Blame) and the Student Receiving Neutral Feedback (Neutral) in three Experimental Conditions

	BN equally liked (<i>n</i> = 20)	B better liked (<i>n</i> = 18)	N better liked (<i>n</i> = 22)
Blame	6.15	6.44	3.68
Neutral	4.85	4.83	6.00

Note: B = blamed student; N = student receiving neutral feedback.

In a subsequent analysis step, we pooled the subjects from the conditions „BN equally liked“ and „B better liked“ and compared their responses to the additional questions with the responses from the subjects from the condition „N better liked“.

With regard to the first question (Which student does the teacher want to blame?), there was no significant difference between the groups. Concerning the question about teacher surprise and teacher’s usual blame, the responses in the condition „N better liked“ agreed nearly perfectly with those of the „L-schema“ group, whereas the responses from the pooled

condition „BN equally liked“ and „B better liked“ corresponded with the responses obtained in the „E-schema“ group in Study 1. Therefore, we refrain from a more detailed description of these results. Concerning the two new questions, the results also are in line with our theoretical rationale: In response to the question of who usually shows better performance during class, 75.7% of the subjects in the „BN equally liked“ plus „B better liked“ condition named the blamed student, whereas 55.5% of those in the „N better liked“ condition named the student who received neutral feedback (and only 15.0% the blamed student), $\chi^2[N = 57, df = 2] = 20.25, p < .001$. In response to the question who of the two students attracts more negative notice during class, only 2.7% of the subjects in the „BN equally liked“ plus „B better liked“ condition named the blamed student, whereas 65.0% of the subjects in the „N better liked“ condition did so, $\chi^2[N = 57, df = 2] = 30.46, p < .001$.

General Discussion

Consistent with the findings of Meyer et al. (1997) mentioned in the Introduction, Study 1 again failed to replicate, on the mean level, the often-documented „apparently paradoxical“ effect of blame (see Meyer, 1992). This effect consists of blame for failure leading to the inference that the blaming person estimates the blamed person's ability as higher than that of another person receiving neutral feedback for an identical failure. However, analyses on the individual level revealed that the paradoxical effect of blame in Study 1 was not absent for *all* subjects, but only for a subgroup (46 % of the subjects). To explain these findings, we hypothesized that the two subgroups used different cognitive schemata, the E-schema versus the L-schema, for interpreting teacher blame (or lack of blame) for failure to infer the person's ability. The results of both studies reported in this article supported this hypothesis. The strongest support was obtained in Study 2, which found that, if the use of the L-schema was prevented or at least made difficult by direct information concerning teacher liking, nearly all subjects used the E-schema (provided that they accepted the information), resulting again in the typical paradoxical effect of blame. In contrast, if the use of the L-schema was promoted by the additional information given, nearly all subjects used this latter schema, resulting in the disappearance of the paradoxical effect of blame; instead, nearly all subjects now rated the student receiving neutral feedback as higher in ability.

Given these findings, it is plausible to attribute the divergence between the findings of prior investigations, in which a paradoxical effect of blame was consistently found (for a summary, see Meyer, 1992) and the results of Meyer et al. (1997) and of the present Study 1, in which this effect was obtained for a subgroup of subjects only, to differences in the cognitive schemata that were *spontaneously* used by the subjects for the interpretation of blame for failure: Whereas in the previous studies, most subjects seem to have spontaneously used the E-schema to make ability inferences from blame (or lack of blame) for failure, in Study 1 about half of our subjects spontaneously used the L-schema. As a result, a significant paradoxical effect of blame was no longer obtained on the level of mean responses.

The results of Study 2 suggest that most subjects have available *both* causal schemata and can be induced to use either one by appropriate situational information. However, the studies reported in this article leave unanswered the question which learning experiences lead different people to use *spontaneously* one or the other cognitive schema for the interpretation of blame in ambiguous situations. This is a question for future research.

On a more general level, the present research has demonstrated the usefulness of the concept of causal schemata, or causal knowledge structures, for the explanation of social judgments (here: ability inferences). The explanatory power of the causal schema concept has occasionally been questioned, the main reason being that it has often been used in an epistemically circular way (Fiedler, 1982; see also Sedikides & Anderson, 1992). That is, the presence of a particular schema was first *inferred* from the subjects' judgments, and the inferred schema was then used to *explain* these very judgments. However, our studies are not subject to this criticism, because the postulated E-schema and L-schema were either assessed (both studies) or manipulated (Study 2) independently of the ability judgments which the two schemata were invoked to explain. In support of the schema explanation of the ability inferences, it was found in Study 1 that the correct prediction of the subjects' ability judgments was possible in 84% of the cases. However, the strongest evidence for the operation of the two schemata came from Study 2, in which the stimulus information was manipulated. This study demonstrated that which schema was used for the interpretation of blame depended on the specific information available in the situation. When the stimulus information excluded the use of the L-schema (Conditions „BN equally liked“ and „B better liked“), the subjects seem to have fallen back to the E-schema, resulting in a paradoxical effect of blame for failure (that is, the blamed student was rated as higher in ability than the student receiving neutral feedback). In contrast, when the stimulus information activated the L-schema (Condition „N better liked“), a reversal of the paradoxical effect was observed (that is, the student receiving neutral feedback was rated as higher in ability than the blamed student).

Additional support for the hypothesis that people use either the E-schema or the L-schema for interpreting blame comes from a recent study by Binser and Försterling (in press). These authors asked their participants to write a story to a TAT-like picture of either a social or an achievement situation before presenting them with a scenario describing a teacher-student-interaction similar to the one used in our Study 1. More paradoxical interpretations of blame were obtained in the second condition (achievement scene) than in the first (social scene). Presumably, the priming procedure activated either the E-schema (achievement scene) or the L-schema (social scene).

In sum, the present findings extend prior theorizing and research on the effects of blame by demonstrating that at least two schemata, the E- and the L-schema, are used to interpret blame, with opposed effects on ability inferences. Based on previous research on the paradoxical effects of blame, it is to be expected that these opposed ability inferences have similarly opposed effects on the blamed person's success expectancies and emotional reactions (Meyer, 1992).

References

1. Barker, G., & Graham, S. (1987). Developmental study of praise and blame as attributional cues. *Journal of Educational Psychology*, 79, 62-66.
2. Binser, J. M., & Försterling, F. (in press). Paradoxe Auswirkungen von Lob und Tadel: Personale und situationale Moderatoren [Paradoxical effects of praise and blame: personal and situational moderators]. *Zeitschrift für Entwicklungspsychologie und Pädagogische Psychologie*.
3. Blickle, G. (1990). Leistungssanktionen und Fähigkeitseinschätzungen: Der Verstehensvorgang bei scheinbar paradoxalen Wirkungen von Lob und Tadel [Evaluative feedback and ability

- estimates: The process of interpretation in the seemingly paradoxical effects of praise and blame]. *Sprache & Kognition*, 9, 113-129.
4. Blickle, G., & Groeben, N. (1988). Gegen einen objektivistisch halbierten Kognitivismus. Kognitiv-konstruktives Sprachverstehen und nicht-paradoxe Wirkungen von Lob und Tadel - Teil 2 [Cognitive-constructive interpretation of language and nonparadoxical effects of praise and blame - Part 2]. *Zeitschrift für Sozialpsychologie*, 19, 103-117.
 5. Fiedler, K. (1982). Causal schemata: Review and criticism of research on a popular construct. *Journal of Personality and Social Psychology*, 42, 1001-1013.
 6. Graham, S. (1990). Communicating low ability in the classroom: Bad things good teachers sometimes do. In S. Graham & V. S. Folkes (Eds.), *Attribution theory: Applications to achievement, mental health, and interpersonal conflict* (pp. 17-36). Hillsdale, NJ: Erlbaum.
 7. Groeben, N., & Blickle, G. (1988). Gegen einen objektivistisch halbierten Kognitivismus. Kognitiv-konstruktives Sprachverstehen und nicht-paradoxe Wirkungen von Lob und Tadel - Teil 1 [Cognitive-constructive interpretation of language and nonparadoxical effects of praise and blame - Part 1]. *Zeitschrift für Sozialpsychologie*, 19, 85-102.
 8. Heider, F. (1958). *The psychology of interpersonal relations*. New York: Wiley.
 9. Hofer, M. (1985). Zu den Wirkungen von Lob und Tadel [On the effects of praise and blame]. *Bildung und Erziehung*, 38, 415-426.
 10. Hom, H. L. (1991). Developmental conceptions of praise and ability in sport. Paper presented at the meeting of the Society for Research in Child Development.
 11. Horn, T. S. (1985). Coaches' feedback and changes in children's perceptions of their physical competence. *Journal of Educational Psychology*, 77, 174-186.
 12. Kukla, A. (1972). Foundations of an attributional theory of performance. *Psychological Review*, 79, 454-470.
 13. Lanzetta, J., & Hannah, T. (1969). Reinforcing behavior of „naive“ trainers. *Journal of Personality and Social Psychology*, 11, 245-252.
 14. Meyer, W.-U. (1973). *Leistungsmotiv und Ursachenerklärung von Erfolg und Misserfolg* [Achievement motivation and causal attribution of success and failure]. Stuttgart, Germany: Klett.
 15. Meyer, W.-U. (1982). Indirect communications about perceived ability estimates. *Journal of Educational Psychology*, 74, 888-897.
 16. Meyer, W.-U. (1992). Paradoxical effects of praise and criticism on perceived ability. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 3, pp. 259-283). Chichester, England: Wiley.
 17. Meyer, W.-U., Bachmann, M., Biermann, U., Hempelmann, M., Plöger, F.-O., & Spiller, H. (1979). The informational value of evaluative behavior: Influences of praise and blame on perceptions of ability. *Journal of Educational Psychology*, 71, 259-268.
 18. Meyer, W.-U., Mittag, W., & Engler, U. (1986). Some effects of praise and blame on perceived ability and affect. *Social Cognition*, 4, 293-308.
 19. Meyer, W.-U., Reisenzein, R., Dickhäuser, O., Blitz, E., Brämer, A., Krone, M., & Reich, C. (1997). Seemingly paradoxical effects of blame on ability inferences? New findings. Unpublished Manuscript, University of Bielefeld.
 20. Miller, A. T., & Hom, H. L. (1997). Conceptions of ability and the interpretation of praise, blame and material rewards. *Journal of Experimental Education*, 65, 163-177.
 21. Miller, A., Hom, H. L., McDowell, J. W., & Gionfriddo, S. (1989). Influence of developmental conceptions of ability, praise, blame and material rewards on judgments of ability and identification. Paper presented at the meeting of the Society for Research in Child Development, Kansas City.

22. Möller, J. (1999). Soziale, fachbezogene und temporale Vergleichsprozesse bei der Beurteilung schulischer Leistungen: „Paradoxe“ Wirkungen von Lob und Tadel [Social, dimensional, and temporal comparisons: „Paradoxical“ effects of praise and blame]. *Zeitschrift für Entwicklungspsychologie und Pädagogische Psychologie*, 31, 11-17.
23. O’Leary, K., & O’Leary, S. (1972). Behavior modification with children. In K. O’Leary & S. O’Leary (Eds.), *Classroom management: The successful use of behavior modification* (pp. 1-48). New York: Pergamon.
24. Reizenzein, R. (1990a). Gegen eine Fehlinterpretation des attributionstheoretischen Modells scheinbar paradoxer Effekte von Lob und Tadel [Against a misinterpretation of the attributional model of the seemingly paradoxical effects of praise and blame]. *Sprache & Kognition*, 9, 130-142.
25. Reizenzein, R. (1990b). Die Außensicht, die Innensicht, und die Außensicht der Innensicht: Antwort auf Blickle und Groeben [Third person perspective, first person perspective, and third person views of the first person perspective: Response to Blickle and Groeben]. *Sprache & Kognition*, 9, 234-237.
26. Reizenzein, R., Debler, W., & Siemer, M. (1992a). Der Verstehensvorgang bei scheinbar paradoxen Wirkungen von Lob und Tadel [The process of interpretation in the seemingly paradoxical effects of praise and blame]. *Zeitschrift für experimentelle und angewandte Psychologie*, 34, 129-150.
27. Reizenzein, R., Debler, W., & Siemer, M. (1992b). Über „spontane“ Anstrengungsinferenzen bei scheinbar paradoxen Wirkungen von Lob und Tadel [On „spontaneous“ effort inferences in seemingly paradoxical effects of praise and blame]. *Sprache & Kognition*, 11, 129-135.
28. Sedikides, C., & Anderson, C. A. (1992). Causal explanations of defection: A knowledge structure approach. *Personality and Social Psychology Bulletin*, 18, 420-429.
29. Weiner, B. (1986). *An attributional theory of motivation and emotion*. New York: Springer-Verlag.
30. Weiner, B., & Kukla, A. (1970). An attributional analysis of achievement motivation. *Journal of Personality and Social Psychology*, 15, 1-20.

Endnote

¹ A number of authors have challenged the attributional interpretation of the seemingly paradoxical effects of praise and blame and have proposed alternative explanations (Blickle & Groeben, 1988; Groeben & Blickle, 1988; Hofer, 1985). However, as detailed elsewhere, we consider these alternative explanations unconvincing (Reizenzein, 1990a, b; Reizenzein, Debler, & Siemer, 1992a, b; see also Meyer, 1992).