

## ***The Efficacy of Communicative Fairness and Rhetorical Aesthetics in Contributions to Argumentation\****

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### **KEY WORDS**

*aesthetics*

*argumentation*

*ethics*

*figurative  
language*

*integrity*

*persuasion*

*rhetoric*

### **ABSTRACT**

This paper deals with the effects of aesthetic quality and argumentational integrity or fairness on the persuasiveness of contributions to argumentation. Contemporary discussions of aesthetics and morality distinguish three possible relationships: (a) superiority of aesthetics in making contributions persuasive, (b) integrity as a necessary precondition for the efficacy of aesthetics, and (c) a compensatory relationship between aesthetics and integrity. Basic argumentative dialogs were varied in aesthetic quality via the use of figurative language and in fairness via the addition of faulty, insincere, or unjust arguments. Materials were presented in a written (Study I) or spoken form (Study II), and followed with questions exploring cognitive, emotional, and conative aspects of persuasive efficacy. Results of both studies strongly support case (b): Only in arguments perceived as fair can persuasive impact be enhanced by aesthetic means.

### **INTRODUCTION**

Imagine that in the course of argumentation one of the participants makes false assertions, distorts the original meaning of facts or discredits other persons for no other reason than to make his/her position prevail. Most of the time, this sort of behavior is conspicuous and it is evaluated as unfair both by the victim and by neutral observers (for empirical evidence see Blickle & Groeben, 1990; Schreier, Groeben, & Blickle, 1995). Thus, argumentative discussions are evaluated not only according to rational criteria such as tenability and relevance, but also according to ethical criteria such as integrity or fairness. Such ethical criteria for the evaluation of argumentative discussions have been described in the form of 11 standards of fair argumentation, summarizing what fair speakers ought to avoid when making contributions to an argumentative discussion (Schreier & Groeben, 1996; Schreier, Groeben, & Christmann, 1995). These standards form the core of our research on linguistic, personal, and situational factors in the diagnosis and evaluation of argumentational unfairness (e.g., Christmann & Groeben, 1995; Christmann, Mischo, & Groeben, 2000; Christmann,

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Schreier, & Groeben, 1996; Christmann, Sladek, & Groeben, 1998; Groeben, Nüse, & Gauler, 1992; Groeben, Nüse, Christmann, & Gauler, 1993; Schreier & Groeben, 1997).

In the course of this research we have repeatedly been confronted with the provocative question of whether unmitigated fairness does not result in argumentative discussions which are boring, dull, colorless, low in suspense, and thus lacking in persuasive power. Is fairness in argumentative discussions compatible with rhetorical polish? Does it spoil recipients' pleasure or does it constitute a necessary precondition for the effectiveness of the rhetorical, the aesthetic wrapping? In this paper, we will attempt to provide an empirical answer to these questions, that is, we will try to clarify experimentally the relationship between integrity and aesthetic quality of argumentational contributions with regard to their persuasive effects.

Our hypotheses on the relation between integrity and stylistic aesthetics are based on three "ideal" relations distinguished in contemporary discussions of aesthetics and morality (Früchtl, 1996):

- (a) *Superiority of aesthetics.* The aesthetic quality of contributions to argumentation is the decisive factor in eliciting persuasive effects. The moral component can be neglected. Whether participants in an argumentative discussion make false assertions, distort the original meaning of facts, run down the opponent's self-respect, or discredit the opponent in one way or another is secondary. All that counts is whether the rhetorical and aesthetic polish of arguments leads to "pleasure" and "enjoyment" (position of "fundamental aesthetics," with aesthetics constituting the foundation of ethics; Früchtl, 1996, p. 21).
- (b) *Integrity as a necessary condition for the effectiveness of aesthetics.* The decisive factor for the persuasive effectiveness of arguments is the moral component. The aesthetic component is regarded as an additional ornament: Only in the case of fair arguments do aesthetic utterances have a stronger persuasive effect than nonaesthetic ones (positions of "marginal aesthetics" and "perfectional aesthetics"; Früchtl, 1996, pp. 21).
- (c) *Compensatory relationship between integrity and aesthetics.* The aesthetic quality of an argument can compensate for its unfairness, while integrity is able to compensate for a lack of aesthetic quality (position of "parity aesthetics"; Früchtl, 1996, p. 26).

The first goal of the research presented here is to clarify which of these three relationships between aesthetics and integrity is empirically valid. To test the hypotheses, argumentational episodes will be varied systematically with regard to fairness and aesthetic quality and then presented in written form. In everyday communication, however, there are more instances of oral than of written argumentative discussions. Nevertheless, the written presentation has the advantage of higher internal validity because the observed effects can be better attributed to the manipulated variables. For this reason we have chosen the written mode as a point of departure for our research. In this, however, we are confronted with the problem of limited external validity, that is, the problem that the results obtained for written language cannot straightforwardly be generalized for spoken language, although this is often falsely assumed (see Ferreira & Anes, 1994). For this reason we have to test additionally whether the results are valid for the more typical auditory mode as well. Accordingly, this is the second goal of our research. Thus, the overall study consists of two parts: Study I, carried out in the written mode of presentation, and Study II carried out in the auditory mode.

Before describing these studies, we will explain more precisely what we mean by argumentational integrity, stylistic aesthetics, and their relevant persuasive effects.

## THEORETICAL BACKGROUND

### *The construct of Argumentational Integrity*

Argumentational integrity or fairness is the degree to which an argument adheres to argumentational rules (Groeben, Schreier, & Christmann, 1993; Schreier, Groeben, & Christmann, 1995). The construct is based on a prescriptive use of the term “argumentation” (see also Eemeren, Grootendorst, & Kruijer, 1987; Eggs, 1992; Völzing, 1980) as a type of conversation in which the participants attempt to find a solution to a controversial issue by means of a listener-oriented exchange of views based on good reasons (one of its goals) and made acceptable to all participants in a cooperative manner (another goal). The two goals hinge on two prescriptive characteristics: rationality and cooperation. If these are to be at least potentially attainable, we suggest, in drawing upon contemporary theories of argumentation (see Gatzemeier, 1975; Geißner, 1985; Habermas, 1984; Klein, 1981; Köpperschmidt, 1973; Völzing, 1979) that contributions to argumentative discussions must meet the following four conditions:

- I. *formal validity*: Arguments must be valid with respect both to form and content;
- II. *sincerity/truth*: The participants in an argumentation must be sincere, that is, express only opinions and convictions (and argue in their favor) which they themselves regard as correct;
- III. *justice on the content level*: Arguments must be just toward other participants, that is, not run counter to generally accepted moral norms;
- IV. *procedural justice*: The argumentative procedure must be conducted in a just manner, that is, all participants must have an equal opportunity to contribute toward a solution according to their individual (relevant and justifiable) beliefs.

(For a comprehensive explication of these conditions see Schreier, Groeben, & Christmann, 1995.)

The first two conditions relate primarily to the criterion of rationality, the latter two to the criterion of cooperation. Keeping to these conditions is defined as fair, violating them consciously as unfair argumentation. Unfair argumentation is thus characterized by violation of any integrity criterion. Thus, on a high level of abstraction, global criteria for the evaluation of contributions to argumentative discussions are already available. A further specification of these characteristics has led (on a medium level of abstraction) to 11 standards of fair argumentation. These standards were formulated on the basis of a free card sorting by similarity (90 subjects) of ethically dubious argumentational strategies representatively chosen from popular rhetorical literature. A subsequent cluster analysis of the strategy sortings yielded 11 groups of strategies specifying classes of unfair argumentation (for details see Schreier & Groeben, 1990; Schreier & Groeben, 1996). In a further study it was empirically confirmed that subjects asked to evaluate argumentative scenarios containing violations of the 11 standards notice these violations and evaluate them negatively (Schreier, Groeben, & Blickle, 1995). Thus, the rule violations can be considered psychologically real. Hence, in the present study they will be used to provide tests of argumentational integrity.

*The construct of Stylistic Aesthetics*

Rhetorical figures (e.g., alliteration, metaphor, metonymy) have always been viewed as features of appealing, aesthetic speech. For a systematization of rhetorical figures, we draw upon the semiotic classification model developed by Plett (e.g., 1975, 1977). According to Plett, rhetorical figures of style can be classified as syntactic, semantic, and pragmatic deviations from conventional or standard language use (Plett, 1977, p. 127). It is important to note that in Plett's model the notion of "deviation" does not necessarily imply a rule violation; it only refers to a modification or manipulation of the ordinary linguistic pattern which is conspicuous with respect to conventionalized language use. The manipulation itself is rule-bound (Plett, 1975, p. 42). In this model, the rhetorical figure is regarded as a secondary linguistic unit linked to the primary, original, linguistic unit by a specific deviation relation constituting its aesthetic quality. Figures are classified as syntactically deviant, if their phonemic, morphological, sentence, or letter structure deviates from conventional usage; semantic deviations are characterized by a specific relation (e.g., contrast or similarity) between the meaning of the rhetorical figure and the original meaning of the utterance; pragmatic deviations are described as performative deviations from conventional language use (e.g., classical figures of appeal; rhetorical questions).

We have applied the structure of this model (originally developed for text analysis) to argumentative discussions, without being able to adopt all distinctions proposed by Plett. On the syntactic level, we concentrate on phonemic, morphological, and sentence deviations. Deviations on the sentence level, for instance, are represented by anaphoras in the sense in which the term is used in rhetoric as "repetition of the same word at the beginning of successive clauses" (Lanham, 1991, p. 11; Plett, 1973, p. 35) ("Television makes children become violent. Television makes children use violence"). Morphological deviations are represented by alliterations ("Media make meanings"). On the semantic and pragmatic level, we concentrate on those figures considered to be relevant in argumentative discussions and occurring frequently in everyday language. Deviations on the semantic level are nonliteral speech acts (Groeben & Scheele, 1986; see also: Berg, 1978). The relation between the proposition uttered and the conventional proposition can be semantic similarity (e.g., metaphor: "bacillus of violence"), contrast (e.g., irony: ironic comment on a heavy crime movie: "That was really neat") or contiguity (e.g., metonymy: "Television kills people"). Deviations on the pragmatic level are indirect speech acts (Searle, 1979; Sökeland, 1980) characterized by a dissociation of the illocution uttered from the conventional illocution (as in the case of the rhetorical question). As an additional class of deviations we introduce (primarily for reasons of design) deviations which are both semantic and pragmatic. These speech acts are characterized by a dissociation both on the propositional and on the illocutionary level, that is, neither the utterance meaning nor the illocution uttered correspond to the conventional meaning or illocution (e.g., irony and rhetorical question: "Shouldn't we parents buy each of our kids three television sets so that they can finally make an exhaustive use of the programs offered?"). All types of deviations discussed so far potentially confer an aesthetic quality. It is crucial for our approach to aesthetics that deviations must be experienced as aesthetically attractive by the recipients themselves.

Although there are many other components to stylistic aesthetics (e.g., the speaker's presumed intention, the situational context), in this study we will concentrate on testing the validity of the "semiotic deviation" component, because it is a prerequisite for the

subsequent empirical investigation of the relation between aesthetics and fairness (on testing the validity of other components see Mischo, Groeben, & Christmann, 1996a).

### *Efficacy of stylistic aesthetics*

With regard to the effects of stylistic aesthetics we distinguish between cognitive, emotional-evaluative, motivational-conative, and physical aspects of persuasive efficacy. These aspects of aesthetic speech were already elaborated in classical rhetoric and are summarized in the well known triad “docere” (to teach), “delectare” (to please), and “movere” (to move). Hence, they will be covered by the items of our questionnaire employed to assess the aesthetic quality of contributions to argumentative discussions.

For the formulation of questionnaire items, we draw heuristically upon different theoretical sources. With respect to the cognitive aspects of efficacy, we take our bearings from experimental aesthetics (in particular Berlyne’s theory of curiosity: Berlyne, 1974). It covers aspects of surprise, novelty, and complexity in utterances; these aspects overlap with the cognitive aspects to be taken into account on the part of the construct of argumentational integrity, such as the correctness of the cognitive representation of the utterance content and its persuasive effect. For an elaboration of the less well-defined emotional-evaluative and motivational aspects of efficacy, we draw upon both hermeneutic theories of aesthetics from the phenomenological lines of thought and reception aesthetics. Hence, in accordance with Ingarden (1968, p. 281) we conceive of the evaluative, emotional aspect of efficacy as a form of “emotional resonance” caused by the perceived object at a specific moment of time, or “memorability” (van Peer, 1986). The formulation of questionnaire items additionally takes into account the fact that “empathic understanding of other persons’ emotions” may also lead to enjoyment (Höge, 1984, pp. 42f.). For collecting physical aspects of efficacy (Kraft, 1990), we draw on the psychology of emotions (Voss, 1983) and concentrate on such mimic reactions as those typically displayed in cases of surprise.

## **STUDY I: HYPOTHESES ON THE RELATIONSHIP BETWEEN AESTHETICS AND FAIRNESS (WRITTEN PRESENTATION)**

The first study has two goals: (a) to test the validity of our conceptualization of aesthetics of style; and (b) to test our hypotheses concerning the relation between argumentative fairness and stylistic aesthetics. In testing the validity of the construct of aesthetics, we concentrate on evaluation of aesthetics as one aspect of efficacy; in testing hypotheses concerning the relation between aesthetics and fairness, we are primarily interested in the persuasive effects of these variables.

To pit aesthetics against fairness, we first have to be sure that semiotically deviant utterances have the desired aesthetic character, that is, that they are perceived as aesthetically attractive by the recipients. Only if this validation of stylistic aesthetics is successful, can we test the relationship between argumentative fairness and stylistic aesthetics with regard to their persuasive effect. Thus, our first hypothesis reads as follows:

*Hypothesis 1:* Arguments embellished with semiotic deviations will make a better aesthetic impression than those without.

If Hypothesis 1 is confirmed, we can use the pretested materials to test Hypothesis 2,

which represents the three possible relationships between fairness and stylistic aesthetics on the one hand and persuasive efficacy on the other:

*Hypothesis 2a:* Superiority of aesthetics: Arguments judged pleasing will also be judged more convincing than other arguments, regardless of how fair or unfair they appear to be.

*Hypothesis 2b:* Integrity as a necessary condition for the efficacy of aesthetics: Arguments judged pleasing will be judged more convincing than other arguments only if they are also judged to be fair.

*Hypothesis 2c:* Compensatory and cumulative relationship between aesthetics and integrity: Arguments may be judged more convincing when they are judged more pleasing or when they are judged to be fair (compensatory effect). Arguments may be judged particularly convincing when they are judged both pleasing and fair (cumulative effect).

To test these hypotheses, the independent variables “aesthetics” (in the sense of semiotic deviation) and “fairness” and the dependent variable “efficacy” have to be given operational definitions.

## **Method**

The materials<sup>1</sup> used in the study comprised the instruction, written argumentational scenarios, rating-scales, and multiple-choice items for collecting the aspects of efficacy as well as open questions.

*Unfairness.* Drawing upon four characteristics of unfair argumentation constituting the negative of the argumentative conditions described above, and the 11 standards of fair argumentation, the following were classed as violations of rationality:

I. *faulty arguments:* (1) violation of stringency; (2) refusal of justification.

II. *insincere contributions:* (3) pretense of truth; (4) shifting of responsibility; (5) pretense of consistency.

The following were classed as violations of cooperation:

III. *unjust arguments:* (6) distortion of meaning; (7) impossibility of compliance; (8) discrediting of others.

IV. *unjust interactions:* (9) expression of hostility; (10) hindrance of participation; (11) breaking off.

A contribution to an argumentative discussion counts as unfair if a speaker consciously violates one or several of the above standards of fair argumentation. We constructed argumentational scenarios containing violations of two standards of fair argumentation each, both taken from one of the four classes (characteristics) of unfair argumentation. As

<sup>1</sup> Materials used in this study are available on the worldwide web (<http://www.psychologie.uni-heidelberg.de/ae/allg/mitarb/uc/ai/material.htm>).

mentioned before, violations of standards from classes I and II were summarized as violations of rationality, those from classes III and IV as violations of cooperation. In addition, we constructed scenarios containing violations of two standards from different classes of unfair argumentation (“combination of characteristics”) as well as scenarios containing no violation of standards. Thus, a total of four levels of the fairness variable were included in the study. For testing the hypotheses the three levels of unfairness (violations of rationality; violations of cooperation; violations of combinations of characteristics) are combined into the factor level “unfairness” and contrasted with the factor level “fairness” (no violations).

*Stylistic aesthetics.* To determine which rhetorical figures were to count as a means of aesthetically pleasing speech, we asked five experts working in the domain of language psychology and linguistics to rank 20 rhetorical figures selected from the rhetorical literature for their presumed aesthetic quality and their relevance to argumentative discussions. By means of this rating we arrived at 15 rhetorical figures which were then assigned to the classes of semiotic deviation distinguished above (see 2.2). The following figures counted as syntactically deviant: (1) *alliteration* (recurrence of an initial consonant or vowel sound), (2) *anaphora* (repetition of a word at the beginning of successive sentences), (3) *epiphora* (repetition of a closing word at the end of successive sentences), (4) *parallelism* (parallel sentence structure in successive sentences), (5) *ellipsis* (omission of sounds or words), (6) *addition of sounds or words*, (7) *neologism* (use of newly coined words), (8) *archaism* (use of archaic words), and (9) *rhyme*. Figures typical for the class of semantic deviations were: (10) *metaphor*, (11) *metonymy* (substitution by contiguity), (12) *synecdoche* (substitution of part for whole or vice versa) and (13) *litotes* (negation of the contrary). Pragmatically deviant figures are represented by (14) *the rhetorical question*; (15) *irony* was classified as a figure which can count both as pragmatically and semantically deviant. Altogether five levels of semiotic deviation were included in the study (syntactic, semantic, pragmatic, semantic-pragmatic, and no deviations). For testing the hypotheses, all deviant levels are combined into the factor level “semiotic deviation” and contrasted with the level “no deviation.”

*Dialogs.* Argumentative dialogs in written form consisted of fictitious arguments on the subject “causes of violence among kids.” Their suitability for this type of research is demonstrated in Flender, Christmann, and Groeben (1999). Specific parts of utterances of one of the two speakers involved in an episode were varied in fairness and stylistic aesthetics; the content of the episodes was kept constant. Because it was not possible to keep the length of utterances constant, length of utterances was included as a covariate.

In constructing the variations of these episodes, we proceeded from five basic fair scenarios. For each of these scenarios an unfair version was constructed, containing violations either from one of the four characteristics of unfair argumentation or from combinations of characteristics. Each of these 10 episodes (5 fair and 5 unfair) were varied according to the five levels of the stylistic aesthetics variable. Thus, a total of 50 different episodes were constructed. In addition, one semiotically nondeviant and fair scenario was included for the purpose of controlling for potential sensitization effects. In order to determine whether the realization of specific combinations of unfairness and semiotic deviation did in fact constitute valid operationalizations of the respective factor combinations, utterances were

rated by 10 psychologists and linguists for the relevant dimensions of (un)fairness and semiotic deviance; raters were asked to assign the utterances to one of the four levels of the fairness variable and one of the five levels of the aesthetics variable. For semiotic deviations, the inter-rater agreement can be considered substantial ( $\kappa = .69$ ) according to Landis and Koch (1977, p. 165); for combinations of semiotic deviations and unfairness it was moderate ( $\kappa = .46$ ; for computation see Fleiss, Cohen, & Everitt, 1969). Comments from experts were used to improve the relevant episodes. Examples of a semiotically deviant but unfair and a nondeviant but fair scenario are given in Appendix 1(a).

*Questionnaire (measurement of the dependent variable).* A questionnaire allowed participants to reflect the four dimensions of efficacy previously discussed. For assessing emotional-evaluative effects, statements were compiled such as: (This utterance) “was pleasing”, “was disgusting”, “was beautiful”. The cognitive domain was represented by items like “was stimulating”, “was surprising”, “remained in my memory”<sup>2</sup>. For the physical domain items such as “made me smile”, “produced a feeling of tension, excitement”, “brightened my face” were typical. For the conative-motivational domain, items like “carried conviction for me”, “carried conviction for participants with a completely different position” were selected. Subjects were asked to indicate on a 5-point rating scale the extent to which they agreed with statements (from 1 = not at all to 5 = very much). Examples of questionnaire items from all four domains are given below:

The utterances of (speaker A/speaker B)

- ... were only intelligible for me after thinking about them.
- ... turned out well.
- ... made me share the feelings of the speaker.
- ... made me smile.

In addition, two open questions were included to collect subjectively perceived semiotic deviations and integrity violations.

To test whether aesthetic quality and unfairness affected comprehension, we formulated statements on the controversial issue of the argumentative discussion, the positions of the two speakers, and potentially supporting propositions. These statements and similar distractor items were presented as multiple-choice tasks; subjects were asked to select the correct item. The correctness/incorrectness of multiple choice items had been confirmed by experts (see Mischo, et al. 1996, pp. 29). The experts were six psychologists working in the field of argumentation. They were asked to rank the items from five multiple choice tasks according to their degree of correctness. The agreement of individual ranking lists was tested by Kendall’s coefficient of concordance  $W$ . All Kendall’s  $W$ -values were significant. An example of a multiple choice task is given in Appendix 1(b).

### *Subjects*

The study was carried out in spring 1996 at the Universities of Heidelberg and Cologne.

<sup>2</sup> To prevent any misunderstandings: our concern is with aesthetic experience and not with memory performance. We are interested in subjects’ statements about memory, but not in memory itself. For this reason we do not give a recall test.

Seventy-four subjects participated in the study: 43% were students of psychology, 57% students from other faculties; 45% were male, 55% female. Participation in the study was voluntary; subjects were reimbursed by a cinema token.

### *Procedure*

Subjects were informed that the study was about the evaluation and persuasiveness of arguments presented in the course of argumentational episodes; the structure of the episodes was explained and the rating-scales were illustrated. Each subject received five written argumentational episodes which they were asked to evaluate with regard to the different aspects of efficacy and (un)fairness. In addition, 36 of the subjects received one additional fair and nondeviant episode as a control to test for potential sensitization effects. Thus, 38 subjects were given five scenarios only, while 36 subjects received five scenarios and one control scenario. In order to cover all combinations of independent variables, we arranged 10 different groups of scenario versions (Appendix 2), each containing different combinations of the levels of the fairness variable (fair, violations of rationality, violations of cooperation) and the levels of the aesthetic variable (five classes of semiotic deviations). Each subject was assigned to one of the 10 groups (columns). To control serial effects within these 10 groups the episodes were presented in random order.

The questionnaires comprised a total of 29 items and five multiple-choice tasks to collect the aspects of efficacy, and two open questions to cover both subjectively perceived violations of integrity and semiotic deviations. Subjects filled in the questionnaires at home; on average, completion took one hour.

### *Design*

To test the validity of the stylistic aesthetics construct (Hypothesis 1), a one-factorial design was performed; the length of utterances was included as a covariate.

To test the Hypotheses (2a-2c) on the relation between stylistic aesthetics and fairness, two levels of the fairness variable (unfair: violations of rationality, violations of cooperation, violations of combinations of characteristics vs. fair: no violations) were combined with two levels of the stylistic aesthetics variable (deviant: syntactic, semantic, pragmatic, semantic and pragmatic vs. nondeviant). The realization of the complete design requires a successful validation of the construct of stylistic aesthetics. The final design thus depends on the results of this validation.

## **Results**

### *Clarification of the efficacy dimensions*

Factor analysis was used in order to clarify the dimensions of efficacy. The analysis was based on 31 items (29 items of efficacy and 2 comprehension items, based on the sum scores of correctly identified multiple choice tasks referring to the argumentative positions and potentially supporting propositions of each of the two speakers involved in the scenarios) and a total of 393 scenario evaluations (missing values:  $N = 13$ ). After an initial extraction of the principal components, the eigenvalue, scree-test, and interpretability supported a six-factor solution. We subsequently applied an oblique rotation method (PROMAX)

because we did not want to exclude from the analysis theoretically possible correlations between the dimensions. The six factors extracted explain 66% of the total item variance. The results of the factor analysis are documented in Appendix 3. Four items were eliminated because of low communalities (squared multiple correlations with the six factors).

According to the theory (previously discussed), these six factors should cover both the primarily cognitive and the emotional-evaluative aspects of efficacy. It is obvious that this is the case; Factors 1, 4, and 6 refer to the cognitive scope of efficacy, Factors 2 and 3 to the emotional-evaluative scope, and Factor 5 to a combination of the two. As is common practice, the factors were named on the basis of those elements which the items with a high loading on the factor had in common. Because of the high loadings of the items “convincing”, “inspiring”, “turned out well”, and so forth, Factor 1 was called “persuasive impact of arguments”. Factor 4 covers Berlyne’s “cognitive complexity” (“was intelligible after thinking about it”, “was complex”), and Factor 6 is dominated by the sum scores of correctly identified multiple-choice items, summarized as “cognitive representation of arguments”. On the emotional-evaluative side, Factor 2 represents “aesthetic quality” on the basis of the items “beautiful”, “charming”, “elegant”, “allowed me to enjoy my feelings” and so forth; Factor 3, with the items “stimulating”, “engendered emotions”, “had an after effect”, “kept me in suspense”, “was surprising”, represents “emotional suspense”. Finally, Factor 5 comprises items which refer to both cognition and emotion; for this reason it was named “rationality versus emotionality”.

The efficacy dimensions most important with respect to the independent variables —“persuasive impact of arguments” (Factor 1) and “aesthetic quality” (Factor 2)—account for 24% and 21% of the total variance, respectively.

### *Hypothesis 1: Testing the validity of aesthetics*

In Hypothesis 1 we postulate that semiotically deviant utterances should be judged more pleasing than semiotically nondeviant utterances. To represent aesthetic quality, we used the scores of Factor 2 from the factor analysis of the efficacy dimensions described above. The length of utterances was taken into account as a covariate. All tests correspond to by-materials analysis because the scenarios are regarded as independent measures. Table 1 shows the means and standard deviations for the levels of the semiotic deviation variable.

Table 1 shows that the lowest mean occurs in the semiotically nondeviant cell, but the contrast between semiotically deviant and nondeviant does not approach significance,  $F(1, 387) = 2.47, p < .12^3$ . For this reason, the least pleasing of semiotic and pragmatic deviations, that is irony, is excluded. The remaining deviant levels are combined in order to test the contrast between deviant versus nondeviant utterances by means of a simple  $t$ -test. The results show that the contrast is significant ( $t = 1.93; df = 1, 317; p < .027$ , one-tailed). Apart from ironic speech acts, semiotically deviant utterances are thus

<sup>3</sup> Analysis of variance conventionally presupposes a normal distribution of data. Even if this presupposition were not met, it would not present any problem in the present study. Here we have computed the analysis of variance within the General Linear Model (GLM) and the GLM only presupposes the normal distribution of error terms (Werner, 1997, pp. 82). Because of the cumulation of either type I or type II error we refrained, however, from testing the residuals.

**TABLE 1**

Effects of semiotic deviation on Factor 2 “aesthetic quality” written mode of presentation—means with [*SD*] and (number of evaluated scenarios)

<i>Nondeviant</i>	<i>Semiotic deviation</i>				
	<i>Deviant</i>	<i>Syntactic</i>	<i>Semantic</i>	<i>Pragmatic</i>	<i>Semantic and pragmatic</i>
-0.14	0.05	0.07	0.20	0.01	-0.09
[0.77]	[1.07]	[1.03]	[1.21]	[1.02]	[0.98]
(102)	(291)	(73)	(72)	(73)	(73)

evaluated as more aesthetically pleasing than nondeviant ones.

The surprising result for ironic speech acts was clarified by further analysis (consideration of recipients’ views of the speakers’ goals and intentions). Ironic speech acts are evaluated as aesthetically pleasing only if recipients assume that the speaker’s intentions are positive. Where irony was misunderstood as a form of running another person down, it did not generate an aesthetic effect (for details see Mischo et al., 1996a).

Differences between semiotically deviant and nondeviant utterances, were also examined via Factors 4 “cognitive complexity” and 6 “cognitive representation of arguments”. As expected, the relevant contrasts were not significant (for details see Mischo et al., 1996a). Thus the figurative language which we used seemed to have little effect on perceived complexity or clarity of arguments, and a marked effect on the informants’ enjoyment.

Since semiotic deviation does produce aesthetic effects, we can use semiotic deviation in testing the relation between aesthetics and (un-)fairness in their effect on efficacy (Hypotheses 2a–2c) in a 2 × 2-design for “(un)fairness” (fair vs. unfair) by “stylistic deviation” (deviant vs. nondeviant).

#### *Hypotheses (2a–2c): Relation between (Un)fairness and Stylistic Aesthetics*

We use the item scores of Factor 1 “persuasive impact of arguments” to represent persuasive efficacy. Hence our hypothesis translate into the following predictions:

*Hypothesis 2a* (superiority of aesthetics) predicts a significant contrast between deviant and nondeviant utterances on Factor 1 with no effect of fairness and no interaction.

*Hypothesis 2b* (integrity as a necessary condition for the efficacy of aesthetics) predicts that semiotically deviant utterances will score higher on Factor 1 than nondeviant utterances only in the case of fair cells.

*Hypothesis 2c* (compensation of a lack of aesthetics by integrity and vice versa) predicts that the contrasts fair versus unfair and deviant versus nondeviant will be significant; the interaction of semiotic deviation with fairness will not be significant.

**TABLE 2**

Effects of fairness and semiotic deviation on Factor 1 “persuasive impact” written mode of presentation—means with [*SD*] and (number of evaluated scenarios)

<i>Fairness</i>	<i>Semiotic deviation</i>	
	<i>Nondeviant</i>	<i>Deviant</i>
<b>Fair</b>	-0.13 [1.02] (64)	0.48 [0.88] (109)
<b>Unfair</b>	-0.39 [1.01] (38)	-0.22 [0.94] (109)

To test these hypotheses<sup>4</sup>, main and interaction effects and planned comparisons were computed within the 2×2-factorial design for fairness (fair vs. unfair) by semiotic deviation (deviant vs. nondeviant). Because the independent variables are different scenario versions, each cell is the average over subjects for a specific version of a text (by-materials analysis). Table 2 shows the means and standard deviations for all cells.

The results of the 2×2 ANCOVA (using the length of an utterance as the covariate) show a significant main effect for fairness,  $F(1, 315)=17.47, p < .0001$ , a significant main effect for semiotic deviation,  $F=8.18; df=1, 315; p < .0045$ , and a significant interaction,  $F(1, 315)=3.92, p < .0048$ . This means that Hypotheses 2a and 2c can be rejected because 2a postulates no effect for fairness and no interaction and 2c postulates no interaction. In Hypothesis 2b we postulate a significant contrast between nondeviant and deviant utterances only for fair versions. The planned comparisons show the expected effect for fair utterances,  $t=3.87; df=1, 315; p < .0001$ , not for unfair utterances,  $t=.64; df=1, 315; p < .52$ . Consequently, Hypothesis 2b has to be accepted: the arguments must be fair for their aesthetic elements to make them persuasive.

To improve the interpretation of our results we applied the same ANCOVA design to Factor 3 “emotional suspense” and Factor 5 “rationality versus emotionality” as the dependent variables. The results were significant only for Factor 5 “rationality versus emotionality”. Table 3 shows the means, standard deviations, and numbers of scenarios evaluated of Factor 5. Negative values indicate high rationality.

The data yield a significant main effect for fairness,  $F(1, 315)=27.06, p < .0001$ , and a significant interaction,  $F(1, 315)=4.76, p < .029$ . A comparative inspection of cell

<sup>4</sup> We regard the hypotheses as conceptual units; that is Hypotheses 2a, 2b, and 2c are mutually exclusive. In order to prevent type II error cumulation, we accept a type I error of  $p < .05$  for each of these rival hypotheses. By adjusting “per hypothesis” instead of “per experiment” we take into consideration type I error as well as power (see Keselman & Keselman, 1987; for a legitimation: Kirk, 1982; Westermann & Hager, 1983; Hager & Westermann, 1983; Keppel & Zedeck, 1989, pp. 169).

**TABLE 3**

Effects of fairness and semiotic deviation on Factor 5 "rationality versus emotionality" written mode of presentation—means with [*SD*] and (number of evaluated scenarios)

<i>Fairness</i>	<i>Semiotic deviation</i>	
	<i>Nondeviant</i>	<i>Deviant</i>
<b>Fair</b>	-0.50 [1.00] (64)	-0.08 [0.99] (109)
<b>Unfair</b>	-0.36 [0.89] (38)	-0.19 [0.95] (109)

Note: Negative values indicate rationality, positive emotionality

means shows that fair arguments which do not contain semiotic deviations are evaluated as more rational than fair arguments containing semiotic deviations,  $t = -3.05$ ;  $df = 1, 315$ ;  $p < .014$ , unfair arguments containing semiotic deviations,  $t = -4.95$ ;  $df = 1, 315$ ;  $p < .0001$ , and unfair arguments without semiotic deviations ( $t = -4.61$ ;  $df = 1, 315$ ;  $p < .0001$ ; adjusted according to Tukey-Kramer). Thus, fair contributions which do not contain semiotic deviations are considered to be the most rational of all.

## Discussion

Study I was aimed at clarifying the relation between argumentational (un)fairness and stylistic aesthetics with regard to persuasive efficacy. Three prototypical possibilities were distinguished and empirically tested: (a) superiority of aesthetics; (b) integrity as a necessary condition for the efficacy of stylistic aesthetics; (c) compensation for lack of aesthetics by integrity and vice versa.

To test these possibilities we had first to explicate and test the validity of the construct of stylistic aesthetics, at least as represented by semiotic deviation (syntactic, semantic, pragmatic, and semantic-pragmatic). Apart from ironic speech acts, deviant passages were judged more appealing than nondeviant. On the basis of this confirmation we were then able to test the three hypotheses. The results<sup>5</sup> show that the use of aesthetic figures of speech does indeed enhance the persuasive effect of argumentative discussions, provided that no violations of argumentational integrity occur.

It follows that integrity can be considered a necessary condition for the efficacy of linguistic aesthetics. Consequences of these results for argumentation practice are discussed in the general conclusions.

<sup>5</sup> The results of Study I are based on "objective" semiotic deviations and integrity violations identified and classified by experts in the field. Tests on the basis of expert judgments can be considered stronger than those on "subjective" data (i.e., deviations and integrity violations perceived and correctly identified by informants themselves) because not all of the classified deviations were identified by the informants.

## STUDY II: REPLICATION OF STUDY I IN THE AUDITORY MODE OF PRESENTATION AND COMPARISON OF METHODS

### Introduction

In Study I, hypotheses on the relationship between argumentational integrity and stylistic aesthetics were tested using written materials. We chose the written mode of presentation as our starting point because of its higher internal validity: here effects can be more unequivocally attributed to the manipulation of the critical independent variables than they can be in the auditory mode of presentation where the observer is not free to examine the materials at his or her leisure. In everyday life, however, arguments are usually exchanged in the auditory and not in the written mode. As a consequence, we must ask to what extent the results obtained in Study I (written mode) are in fact ecologically valid. If argumentational integrity is important to everyday argumentative communication, our findings should apply to what people hear as well as to what they read. Although it is often tacitly assumed that results can be generalized across different presentation modes, this is in fact questionable and can by no means be taken for granted (Ferreira & Anes, 1994). In written language, for example, the reader can control the rate of information processing, whereas in spoken language the hearer has to adapt to the speech rate of the speaker. In addition, word and sentence boundaries are more clearly marked in written than in spoken language, so that processing may be more difficult in the latter case (for a comprehensive discussion and empirical research see Ferreira & Anes, 1994; for research on the effect of presentation modality on the persuasive impact of a message see Chaiken & Eagly, 1983; Stiff, 1994). Since generalizability can thus not be taken for granted, the validity of the conclusions for Study I must be established separately for spoken argumentation. This is carried out here in two stages.

First, Study II tests the same hypotheses as Study I. A statistically significant result in one study and a nonsignificant one in the other, however, does not necessarily imply that there is a significant difference between the two presentation modes. Then, for this reason, we compare the results obtained in the two studies directly. This comparison naturally presupposes that the *ceteris-paribus* condition is met (equivalent sample, same argumentational episodes, same operationalization etc.).

In this study all hypothesis are tested on the basis of semiotic deviations and integrity violations which nonexperts (i.e., the subjects themselves) recognized. It seems advisable to use this method of defining the materials, because the pressure of processing arguments as they are spoken may force subjects to notice fewer semiotic deviations than they might find when reading at their own pace. In fact, subjects' answers to the open questions on linguistically conspicuous utterances and integrity violations (see above "material") were categorized according to their correctness by two independent raters ( $\kappa = .897$ ). In Study I, semiotic deviations and integrity violations were correctly identified in 34% of a total of 393 scenarios evaluations. In Study II, the score was only 27% of a total of 378 evaluations. Because this difference is significant ( $\chi^2 = 14.598$ ,  $df = 1$ ,  $p < .001$ ), and both recognition rates are low we test all hypotheses on the basis of subjects' judgments. For the comparison between the auditory and written presentation mode we of course draw upon those results of Study I obtained on the basis of nonexpert judgments<sup>6</sup> which are entirely analogous to the results obtained in Study I on the basis of objective (expert) judgments.

## Hypotheses

*Content hypotheses:* The hypotheses concerning the effects of fairness and stylistic aesthetics (“content hypotheses”) are the same as in Study I: higher aesthetic quality of semiotically deviant as opposed to nondeviant utterances (1); superiority of aesthetics (2a); integrity as a necessary condition for the efficacy of aesthetics (2b); compensation for a lack of integrity by aesthetics and vice versa (2c).

*Methodological comparison:* For methodological reasons we assume that there are differences between the written and the auditory mode with regard to the evaluation of semiotically deviant versus nondeviant utterances (Hypothesis 1) and with respect to the persuasive efficacy of aesthetics and fairness (Hypothesis 2). This implies that if these hypotheses have to be rejected, the results of the studies can be generalized, that is, considered ecologically valid.

## Method and Procedure

### *Design*

*Content hypotheses:* These are tested using the same designs as in Study I. The operational definition of the independent and dependent variables is also completely analogous to Study I. In order to assess participants’ subjective perception of semiotic deviations and unfair arguments, two open questions were used; the answers were then subjected to content analysis.

*Methodological hypotheses:* To test the methodological Hypotheses 1 and 2, “mode of presentation” has to be included as an additional factor in the above design. The upshot is a  $2 \times 2 \times 2$  factorial design with the variables mode of presentation (auditory vs. written), semiotic deviation (deviant vs. nondeviant), and fairness (fair vs. unfair).

### *Procedure and Sample*

In Study II the same argumentational scenarios and questionnaires (see above “material”) were employed as in Study I, including the two open questions for collecting judgments on semiotic deviations and unfair arguments. The scenarios were recorded on audio cassettes. The speakers were actors instructed to keep exactly to the wording of the scripts. In order to keep prosodic features constant across experimental conditions, marks specifying features of recitation (e.g., pauses and stress) were added to the script prior to recording. All spoken scenarios were checked by members of the project to ensure that these instructions had been followed.

Introductory comments on the scenarios were given to the recipients in written form. Each subject evaluated five scenario versions and one control scenario. The sequence of scenario presentation was the same as in Study I. Thus, the only difference between the written and the audio presentation was modality of presentation. On average, the experimental sessions lasted between 1.5 and 2 hours.

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<sup>6</sup> The results from Study I based on subject judgments are available on the worldwide web (<<http://www.psychologie.uni-heidelberg.de/ae/allg/mitarb/uc/ai/wwwtab.html>>).

The study was conducted in the spring of 1996 at the Psychology Department of the University of Heidelberg. Seventy subjects participated in the study with a mean age of 25 years. The sample consisted of 46.8% students of psychology and 53.2% students from other faculties; 45% were male and 55% female. In drawing the sample, care was taken to match it (with regard to sex and subject of study) to the sample in Study 1.

## Results

The following results refer to: (1) the validation of the construct of stylistic aesthetics, and (2) relation between aesthetics and (un)fairness. We first present the results of the replication study referring to the content hypotheses, subsequently we present the methodological comparison between the two presentation modes.

As in Study I, testing the content hypotheses requires clarification of the dimensions of efficacy. Again, factor analysis was used for this purpose (subjects:  $N=70$ ; evaluated scenarios:  $N=378$ ; all subjects evaluated five scenarios, 28 subjects received an additional control scenario; items:  $N=31$ ). This led to a factor structure similar to that reported in Study I (here marked by the index “a” for auditory presentation). The factor pattern for the two factors which are the focus of the present study, “aesthetic quality” and “persuasive impact of arguments”, was practically the same as in Study I, that is, same item pattern per factor and same rank order of item loadings on the factors.

To test the methodological hypotheses, it was necessary to determine the dimensions of efficacy suitable for the description of the covariation common to both modes of presentation. Accordingly, a factor analysis of all observations from both studies was performed (evaluated scenarios:  $N=771$ ; subjects:  $N=144$ ; items:  $N=31$ ; see appendix D). The statistical procedure was the same as in the two preceding factor analyses. The results show a pattern similar to those obtained for written (see Appendix 3) and auditory presentations. Consequently, the factor names were retained. Factors were, however, marked with a “c” (for “common factorization”): Factor 1: “persuasive impact of arguments (c)”; Factor 2: “emotional suspense (c)”; Factor 3: “aesthetic quality (c)”; Factor 4: “cognitive complexity (c)”; Factor 5: “emotionality versus rationality (c)”; Factor 6: “cognitive representation of arguments (c)”. These “common factors” were used to test methodological Hypothesis 1. For reasons of space, we will again concentrate on the two factors “aesthetic quality (c)” and “persuasive impact of arguments (c)”.

## Results of the replication study

### *Validation of the conceptualization of aesthetics: Content Hypothesis 1*

Content Hypothesis 1 postulates that semiotically deviant utterances should be judged more pleasing than nondeviant ones. To represent aesthetic quality, the scores for the factor “aesthetic quality (a)” were used.

To start with, subjects’ answers to the question on linguistically conspicuous utterances determined which utterances they perceived as deviant. Subjects’ answers were then categorized as syntactic, semantic, pragmatic, and semantic-pragmatic deviations. The analysis was carried out by two raters (interrater agreement: kappa = .897).

On the basis of these data, the same one-way analysis of variance was performed as in Study I. Means and standard deviations for the factor “aesthetic quality” on each level

**TABLE 4**

Effects of subjectively perceived semiotic deviation on Factor 3 “aesthetic quality” auditory mode of presentation—means with [*SD*] and (number of evaluated scenarios)

<i>Subjectively perceived semiotic deviation</i>				
<i>Nondeviant</i>	<i>Deviant</i>			
	<i>Syntactic</i>	<i>Semantic</i>	<i>Pragmatic</i>	<i>Semantic and pragmatic</i>
-0.10	0.04	0.08	0.17	-0.16
[1.04]	[0.63]	[0.88]	[1.14]	[0.99]
(39)	(10)	(19)	(8)	(26)

of the semiotic deviation variable are documented in Table 4.

Overall, no significant contrast between semiotically deviant and nondeviant utterances can be demonstrated,  $F(1, 96)=0.49, p < .5$ . In separate analyses for the fair and the unfair conditions, however, there does exist a significant difference between semiotically deviant and nondeviant utterances, but only in the fair,  $F(1, 49)=5.31, p < .025$ , not in the unfair condition,  $F(1, 9)=0.25, p < .63$ .

If analysis is based on subject judgments, syntactic deviations (alliteration, anaphora, parallelism) in fair contributions are evaluated as most aesthetically pleasing in both studies (auditory and written mode of presentation).

With regard to Factors 4 “charming complexity (a)” and 6 “cognitive representation of arguments (a)”, no significant differences between deviant and nondeviant utterances could be observed. These results are also completely in accord with those obtained in Study I.

The postulated relation between semiotic deviation and aesthetic quality was thus shown to be valid for fair arguments in both auditory and written modes of presentation. In the case of fair arguments, correctly identified semiotic deviations are evaluated as more aesthetically pleasing than nondeviant utterances. For these data, an effect of the mode of presentation is unlikely.

*Relation between fairness and stylistic aesthetics:  
Content Hypotheses (2a) and (2c)*

As regards the relation between stylistic aesthetics and fairness, we are testing the same three hypotheses as in Study I: (2a) superiority of aesthetics, (2b) integrity as a necessary condition for the efficacy of aesthetics, and (2c) compensation of a lack of aesthetics by integrity and vice versa.

To test these hypotheses, we had to identify both the items which subjects correctly identified as violations of integrity and those they correctly identified as semiotic deviations. As with deviations, integrity judgments were based on an open question. Answers were subsequently rated by two judges (inter-rater agreement for categorizing violations of integrity: kappa = .792). As in Study I, a 2 × 2-factorial design had two variables fairness

**TABLE 5**

Effects of subjectively perceived semiotic deviation by fairness on Factor 1 “persuasive impact” auditory mode of presentation—means with [*SD*] and (number of evaluated scenarios)

<i>Subjectively perceived fairness</i>	<i>Subjectively perceived semiotic deviation</i>	
	<i>Nondeviant</i>	<i>Deviant</i>
<b>Fair</b>	0.20 [0.86] (34)	0.63 [0.95] (21)
<b>Unfair</b>	0.44 [1.2] (3)	-0.50 [0.68] (6)

(fair, unfair) and stylistic aesthetics (deviant, nondeviant); the length of utterances was included as a covariate. Again, Factor 1 “persuasive impact of arguments (a)” was the main dependent variable.

Table 5 gives an overview of the means, standard deviations, and frequencies.

The results of the  $2 \times 2$ -ANCOVA show that neither semiotic deviation nor fairness have an effect on the persuasive impact of arguments; consequently, Hypothesis 2a and 2c can be rejected. The decisive interaction effect (semiotic deviation  $\times$  fairness) approaches significance  $F(1, 59) = 3.89, p < .054$ . Therefore, separate comparisons between semiotically deviant and nondeviant utterances were made within fair and unfair contributions. Semiotically deviant versus nondeviant utterances differed significantly only within fair versions ( $t = 1.93; df = 1, 59; p < .05$ ; one-tailed). The data fully support Hypothesis 2b. Only in the case of fair contributions do semiotically deviant utterances score higher for Factor 1 than nondeviant utterances.

Altogether the analyses demonstrate that stylistic aesthetics does not compensate for the low persuasive impact of unfair contributions; on the contrary, in the case of unfair contributions, semiotic deviations lead to a further decrease in persuasive impact. Thus, Hypotheses 2a “superiority of aesthetics” and 2c “compensation of lack of aesthetics by integrity and vice versa” must be rejected. In the case of fair arguments, however, aesthetic utterances enhance the persuasive impact of the contribution. Both in the auditory and in the written mode of presentation, the data are thus in favor of Hypothesis 2b, according to which integrity is a necessary condition for the efficacy of stylistic aesthetics.

## **Results on the comparison of presentation modes**

### *Testing the validity of stylistic aesthetics*

Methodological Hypothesis I predicts that semiotically deviant and nondeviant utterances are evaluated differently, depending on the mode of presentation. Hypothesis testing was performed within a  $2 \times 2 \times 2$ -factorial design for mode of presentation (written vs. auditory), semiotic deviation (deviant vs. nondeviant), and fairness (fair vs. unfair) with length of an utterance as

**TABLE 6**

Effects of subjectively perceived semiotic deviation by fairness on Factor 1 “persuasive impact” total data set (written and auditory mode of presentation)—means with [SD] and (number of evaluated scenarios)

<i>Modality</i>	<i>Subjectively perceived semiotic deviation</i>		
	<i>Subjectively perceived fairness</i>	<i>Nondeviant</i>	<i>Deviant</i>
<b>Written</b>	Fair	-0.16 [1.01] (48)	0.67 [0.75] (22)
	Unfair	0.43 [1.03] (5)	-0.07 [0.74] (6)
<b>Auditory</b>	Fair	0.29 [0.85] (34)	0.71 [0.95] (21)
	Unfair	0.53 [1.20] (3)	-0.44 [0.66] (6)

the covariate. The results for the central dependent variable “aesthetic quality (c)” (Factor 3) show no significant main effects or interactions. Methodological Hypothesis 1 must be rejected.

#### *Relation between fairness and stylistic aesthetics*

Methodological Hypothesis 2 predicts that the presentation mode will have an effect with regard to the relation between aesthetics and fairness. Using the same design above, we examined the dependent variable “persuasive impact of arguments (c)” (Factor 1).

The adjusted cell means are documented in Table 6.

There is only one significant interaction effect (mode of presentation  $\times$  semiotic deviation  $\times$  fairness;  $F(2, 136) = 4.71, p < .011$ ) calling for closer inspection. If the presentation mode has no effect (and Hypothesis 2b “integrity as a necessary condition for stylistic aesthetics” is valid), then semiotically deviant versus nondeviant contributions should differ only within the level fair. Single comparisons of the corresponding differences between means demonstrate that in written mode, the contrast deviant versus nondeviant is—as expected—significant on the level fair ( $t = 3.85; df = 1, 120; p < .0006$ ; one-tailed; Tukey-Kramer adjustment), while in auditory mode, the same contrast approaches significance ( $t = 2.03; df = 1, 120; p < .10$ ; one-tailed; Tukey-Kramer adjustment). On the level unfair, however, no contrast even approaches significance.

Thus the data can again be considered as evidence in favor of Hypothesis (2b): Integrity is a necessary condition for the efficacy of stylistic aesthetics. This result is independent of the presentation mode. A weak effect of the presentation mode, could,

however, be detected: Hypothesis 2b is supported to a slightly greater extent in the written than in the auditory mode of presentation (see the means fair/deviant vs. fair/nondeviant in both presentation modes). Nonetheless the significant three-way interaction does not imply that different hypotheses had to be accepted or rejected in different modes of presentation. Consequently, the methodological Hypothesis (2), which predicts an effect of the presentation mode, can be rejected with regard to the empirically supported role of integrity as a necessary condition of fairness.

## DISCUSSION

The present study pursues two goals: The first goal was to clarify the interplay between stylistic aesthetics and argumentational integrity with regard to their persuasive efficacy. Testing was conducted on the basis of argumentational episodes presented in written form (Study I). The second goal was to test whether the results from the written presentation mode can be generalized for an auditory mode (Study II).

Hypotheses concerning the relation between integrity and stylistic aesthetics were derived from three prototypical, ideal relationships between these two concepts, as distinguished in the contemporary discussion on aesthetics and morality:

- (a) *Superiority of aesthetics*: The aesthetic quality of argumentational contributions is the decisive factor in eliciting persuasive effects, the moral component can be neglected.
- (b) *Integrity as a necessary condition for the efficacy of aesthetics*: The decisive factor for the persuasive efficacy of arguments is the moral component, the aesthetic component is regarded as an ornament which may merely add to the effects of integrity.
- (c) *Compensatory relation between integrity and aesthetics*: The aesthetic quality of an argument is able to compensate for its unfairness, whereas integrity is able to compensate for a lack of aesthetic quality.

Testing of hypotheses first of all required the explication and validation of the two constructs "argumentational integrity" and "stylistic aesthetics". For argumentational integrity, such a conceptualization had already been advanced (in the form of conditions, characteristics, and standards of (un-)fair argumentation) and empirically confirmed. Since an analogous explication of stylistic aesthetics was lacking, we proposed that aesthetics of style can be represented by semiotic deviation on the syntactic, semantic, and/or pragmatic level.

Tests of this proposal and of the three hypotheses on the relation between aesthetics and fairness was carried out in Study I on the basis of written, and in Study II on the basis of spoken argumentational episodes. Additionally, Study II tested the effects of the mode of presentation (written vs. auditory). In the written presentation mode, all analyses were carried out both using expert judgments and using subject judgments to identify semiotic deviations and violations of integrity. In the auditory mode of presentation (probably due to an overload of information processing capacity) subjects correctly identified only a relatively small percentage of semiotic deviations and violations of integrity which had been identified by expert judges. Consequently, hypotheses could not be adequately tested on the basis of expert data, and the comparison between the two presentation modes was conducted on the basis of subject data.

The definition of stylistic aesthetics as semiotic deviation was confirmed in the written mode. The data demonstrate that semantic deviations (e.g., metaphor, metonymy, synecdoche) are considered to be of particular aesthetic quality. Defining ironic speech acts as a form of stylistic aesthetics did, however, prove problematic. Ironic speech acts are evaluated as aesthetically pleasing only if they are indeed perceived as ironic and are not misunderstood as a form of devaluation. In fact, subjects regarded syntactic deviations and ironic utterances as the most pleasing classes of deviations. In the auditory mode, our definition of aesthetics was also confirmed (at least for fair contributions) on the basis of subject judgments. In this case too, syntactic deviations (e.g., alliteration, parallelism, anaphora) and ironic utterances were the most aesthetically pleasing types of deviation. The comparison of presentation modes (on the basis of subject judgments) also confirmed the definition: the mode of presentation did not have any significant effect on the evaluation of different types of deviation.

Further analysis showed that if arguments are presented in an aesthetically pleasing manner, they are neither perceived as higher in cognitive complexity, nor lead to better or worse cognitive representation than nondeviant arguments. This result also is stable across different modes of presentation and demonstrates (in the sense of a discriminant construct validation) that the aesthetic evaluation of contributions to argumentative discussions can be understood as a substantial evaluation dimension in its own right.

Because deviant items were aesthetically enhanced, we could proceed to test the three hypotheses concerning the relation between aesthetics and fairness in their effect on persuasive efficacy. The results—both on the basis of expert (written presentation mode) and on the basis of subject data (written and auditory presentation mode)—strongly support Hypothesis (2b), according to which integrity is a necessary condition for the efficacy of stylistic aesthetics. Only in the case of fair arguments can the persuasive impact of an argument be intensified by the use of aesthetic devices (syntactic, semantic, and/or pragmatic deviations); in the case of unfair arguments, however, their use actually weakens persuasive impact. These results are stable across the two presentation modes as the replication study showed. Thus, it should definitely be kept in mind that the use of rhetorical, aesthetic means for enhancing the persuasive impact of arguments leads to the intended effect only in the case of fair, but not in the case of unfair arguments.

Our findings translate into simple advice: If speakers want to enhance the persuasive impact of their arguments, they should make fair contributions to argumentative discussions and they should present those contributions in a pleasing manner. To be fair, they should observe the standards of argumentational integrity. To be pleasing, they should draw upon rhetorical figures. Of these, syntactic deviations such as alliteration, parallelism, anaphora and so forth appear to be particularly effective. Semantic deviations such as metaphors and metonymy turned out to be effective in the written mode; in the auditory mode, they appear to be too demanding on cognitive processing to be pleasing. Speakers should use ironic speech acts only if they are relatively sure that the recipients are able to understand the irony; ironic speech acts may be counterproductive if they are misunderstood as a form of running the other person down.

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## APPENDIX 1(a)

### Examples of two scenario versions

(extracts from the argumentational episodes)

The scenario versions start with an introduction to the situational context. The complete versions consist of four contributions, two from speaker A and two from speaker B. In Examples 1 and 2 we present the third contribution.

The subject of the extracts from the scenarios given below is “causes of violence among kids”; a social worker (Mrs. Becker) and a scientist (speaker B) meet during a conference on the above subject. Mrs. Becker and the scientist engage in a discussion about the appropriate research methods for investigating the relationship between television and violence. Mrs Becker advocates conducting interviews in the field, while the scientist favors giving questionnaires to students.

The syntactically deviant and unfair parts in the contribution of Mrs. Becker (Example 2) are marked.

Example 1: semiotically nondeviant, fair

Mrs. Becker: I realize the difficulties of doing systematic research with young people in the streets, that it would probably require great care and would have to be very accurate methodologically. But I am convinced that the effort would be worthwhile: in the street you meet kids who watch TV six hours a day and who are at the same time extraordinarily aggressive. This is not true for most of your students, I imagine. I think the basic problem with your approach is the following: Many aspects of the effects of violent movies only emerge in interviews, they are not covered at all by your questionnaires; the same is true for most of the situational and personal circumstances that play a part in the emergence of violence. In addition, important process variables are left out. Apart from this, as far as I know, there are quite a number of approved and reliable methods of conducting interviews, so it would be perfectly possible to carry out a good study in the streets.

Example 2: semiotically deviant (*anaphora/epiphora*) and unfair (discrediting of others)

Mrs. Becker: *I realize* the difficulties of doing systematic research with young people in the streets, that it would probably require great care. *I realize* that it would have to be quite accurate methodologically. *But I realize, too*, that the effort would be worthwhile: In the street you meet kids who watch TV six hours a day and who are at the same time extraordinarily aggressive. This is not true for most of your students, I imagine. I think the basic problem with your approach is the following: many aspects of the effects of violent movies only emerge in interviews, *they are not covered at all* by your questionnaires. Most of the situational and personal circumstances that play a part in the emergence of violence *are not covered at all*. In addition, important process variables *are not covered at all*. But I cannot help feeling that the so-called methodological difficulties of interviews are referred to by persons who do not have the faintest notion about this method. With such a person, it is not possible to engage in a well-grounded argumentative exchange. Apart from this, as far as I know, there are quite a number of approved and reliable methods of conducting interviews, thus, it would be perfectly possible to carry out a good study in the streets.

## APPENDIX 1(b)

### Example of a multiple-choice item for testing the correct understanding of an argument

The following four statements refer to the argumentative position of Mrs. Becker. Subjects were asked to indicate which of the four statements describes the argumentative position of Mrs. Becker most correctly.

*Mrs. Becker argues in favor of interviews with young people in the street because*

- (1) *...interviews are favored by researchers over questionnaires.*
- (2) *...interviews are the only scientific instrument for investigating the relation between violence and television.*
- (3) *...students have no time and thus cannot afford to watch many violent movies; for this reason they are not representative of the population as a whole.*
- (4) *...many of the kids in the street are aggressive and watch television a lot; therefore it is to be expected that scientific research with these kids would be very informative.*

## APPENDIX 2 — presented overleaf...

**APPENDIX 2**

Realized combinations of the independent variables in the scenario versions and arrangement for presentation.

<i>Basic episode</i>	<i>Groups of scenario versions</i>									
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>
1	n/f	n/I	synt/I	synt/f	sem/f	sem/I	prag/I	prag/f	s+p/I	s+p/f
2	synt/II	synt/f	sem/f	sem/II	prag/II	prag/f	s+p/f	s+p/II	n/f	n/II
3	sem/f	sem/III	prag/III	prag/f	s+p/f	s+p/III	n/III	n/f	synt/III	synt/f
4	prag/IV	prag/f	s+p/f	s+p/IV	n/IV	n/f	synt/f	synt/IV	sem/f	sem/IV
5	s+p/f	s+p/co	n/co	n/f	synt/f	synt/co	sem/co	sem/f	prag/co	prag/f

*Semiotic deviations**(Un)fairness*

n:	(semiotically) nondeviant	f:	fair
synt:	syntactically deviant	I:	characteristic I
sem:	semantically deviant	II:	characteristic II
prag:	pragmatically deviant	III:	characteristic III
s+p:	semantically and pragmatically deviant	IV:	characteristic IV
		co:	combination of characteristics

**APPENDIX 3****Written mode of presentation**

Results of the factor analysis (PROMAX-rotation): Factor pattern, reference structure, and factor structure.

<i>Items</i>	<i>Factor</i>					
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
<i>The utterances (were)...</i>						
...carried conviction	.844	.057	.030	.035	-.001	-.045
	.728	.046	.027	.032	-.001	-.043
	.867	.455	.076	.139	-.110	.061
...captivating	.809	.138	.114	.000	.030	-.024
	.698	.111	.103	.000	.029	-.023
	.866	.533	.179	.141	-.065	.082
...carried conviction for a neutral person	.806	-.012	.000	.049	-.085	-.042
	.696	-.010	.000	.044	-.083	.040
	.809	.366	.021	.133	-.190	.054
...carried conviction for a person with a different position	.793	.020	-.059	.083	-.100	-.145
	.685	.016	-.054	.075	-.097	-.139
	.800	.394	-.024	.180	-.221	-.061

<i>Items</i>	<i>Factor</i>					
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
<i>The utterances (were)...</i>						
...turned out well	.765	.152	.011	.021	-.087	.025
	.661	.122	.010	.019	-.084	.024
	.848	.503	.080	.146	-.184	.109
...inspiring	.639	-.272	.576	.014	-.090	-.007
	.551	-.218	.524	.013	-.088	-.007
	.543	.208	.500	.151	-.122	.117
...made me share the feelings of the speaker	.513	.125	.312	.026	.396	.096
	.443	.100	.284	.024	.385	.092
	.544	.436	.399	.111	.350	.193
...interesting	.421	.212	.153	.265	-.219	-.010
	.364	.170	.139	.239	-.213	-.009
	.565	.545	.292	.449	-.314	-.02
...disgusting	-.757	.098	.380	.021	-.039	.003
	-.653	.079	.345	.019	-.038	.002
	-.698	-.102	.398	.100	.062	-.09
...beautiful	.044	.876	.012	-.092	-.060	.038
	.038	.704	-.010	-.083	-.058	.036
	.435	.862	.250	.196	-.08	-.013
...elegant	.003	.742	-.029	.064	.017	.043
	.003	.596	-.027	.057	.016	.042
	.339	.750	.234	.286	-.027	-.025
...allowed me to enjoy my feelings	.117	.733	.018	.020	.108	-.049
	.101	.589	.016	.018	.105	-.047
	.424	.797	.271	.263	.054	-.086
...brightened my face	-.034	.719	.169	-.040	-.024	-.049
	-.029	.578	.153	-.036	-.023	-.047
	.279	.751	.390	.247	-.040	-.098
...pleasing	.376	.613	-.146	.003	.011	.075
	.324	.492	-.133	.003	.010	.071
	.652	.725	.068	.178	-.064	.072
...charming	-.084	.556	.074	.264	-.086	-.123
	-.072	.447	.067	.238	-.084	-.118
	.177	.643	.316	.493	-.151	-.226
...stimulating	-.017	-.008	.823	-.115	.010	-.051
	-.014	-.006	.748	-.104	.010	-.049
	-.019	.220	.787	.110	.075	.002
...engendered emotions	.039	.083	.789	-.078	.157	.030
	.033	.066	.717	-.070	.152	.029
	.073	.324	.807	.134	.209	.087

...continued overleaf

<i>Items</i>	<i>Factor</i>					
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
<i>The utterances (were)...</i>						
...made me aware of my feelings	.039	.035	.765	-.021	.256	-.019
	.034	.028	.695	-.019	.249	-.018
	.038	.286	.786	.161	.296	.037
...had an after-effect	.265	.064	.630	-.197	-.208	.180
	.229	.051	.573	-.178	-.20	.172
	.341	.320	.600	.020	-.161	.257
...kept me in suspense	-.518	.142	.564	.135	-.106	-.050
	-.447	.114	.513	.122	-.103	-.048
	-.426	.151	.628	.318	-.046	-.139
...surprising	-.416	-.091	.557	.310	-.104	.001
	-.358	-.073	.506	.280	-.101	.001
	-.406	.012	.595	.414	-.070	-.084
...intelligible after thinking about it	-.001	.006	-.013	.819	.085	-.030
	-.001	.004	-.011	.739	.083	-.029
	.054	.265	.214	.809	-.053	-.164
complex	.227	.065	-.214	.792	.041	.141
	.196	.052	-.194	.715	.039	.135
	.331	.339	.035	.743	-.122	.026
emotional	-.028	-.029	.143	.206	.863	-.043
	-.024	-.023	.130	.186	.839	-.041
	-.128	.035	.236	.097	.838	-.013
rational	.018	.005	.030	.147	-.691	-.001
	.156	.004	.027	.133	-.673	-.001
	.276	.175	.175	.287	-.736	-.049
cognitive representation of utterance content (sum scores of correctly identified MC-items; speaker A, varied turns)	-.067	-.122	.021	.174	-.016	.820
	-.058	-.098	.019	.157	-.016	.786
	.007	-.153	-.15	-.001	.026	.790
cognitive representation of utterance content (sum scores of correctly identified MC-items; speaker B, turns not varied)	-.116	.087	.005	-.080	-.019	.791
	-.100	.070	.004	-.072	-.018	.758
	.027	-.049	-.042	-.191	.059	.781

*Note:* Each cell contains the standard regression coefficients (factor pattern, first row), the semipartial correlations (factor structure, second row), and the correlations (factor structure, third row).

**APPENDIX 4**

Total data set (written and auditory presentation).

Results of the factor analysis (PROMAX-rotation): Factor pattern, reference structure, and factor structure.

<i>Items</i>	<i>Factor</i>					
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
<i>The utterances (were)...</i>						
...carried conviction	.879	.020	.030	-.019	.011	-.022
	.748	.018	.024	-.017	.010	-.022
	.881	.065	.443	.151	-.121	.021
...captivating	.805	.071	.111	.021	.021	-.042
	.691	.062	.089	.018	.020	-.041
	.859	.153	.523	.221	-.105	-.005
...carried conviction for a neutral person	.794	-.008	-.018	.064	-.049	-.035
	.681	-.007	-.015	.056	-.047	-.035
	.802	.042	.376	.209	-.190	.009
...carried conviction for a person with a different position	.777	-.015	.031	-.001	-.085	-.123
	.667	-.014	.025	-.001	-.081	-.121
	.798	.018	.403	-.160	-.206	-.081
...turned out well	.773	-.057	.122	.058	-.072	.050
	.663	-.050	.098	.051	-.068	.049
	.853	.037	.483	.232	-.217	.082
...made me share the feelings of the speaker	.548	.334	.103	-.053	.400	.020
	.470	.295	.083	-.046	.379	.020
	.541	.409	.447	.109	.350	.040
...inspiring	.544	.501	-.250	.170	-.132	.002
	.467	.443	-.202	.148	-.125	.002
	.503	.498	.222	.398	-.213	.083
...interesting	.440	.126	.110	.410	-.102	.055
	.377	.112	.089	.359	-.096	.054
	.591	.326	.484	.593	-.256	.083
...disgusting	-.715	.419	-.009	.076	-.032	-.037
	-.613	.370	-.007	.067	-.031	-.036
	-.681	.403	-.184	.102	.101	-.050
...engendered emotions	.016	.844	.086	-.170	.078	-.009
	.014	.746	.069	-.149	.074	-.009
	.055	.817	.311	.145	.183	.023
...stimulating	-.059	.835	.030	-.099	-.015	-.044
	-.050	.738	.024	-.086	-.015	-.044
	-.021	.802	.243	.203	.086	-.006
...made me aware of my feelings	.014	.784	.049	-.101	.241	-.035
	.012	.693	.039	-.088	.228	-.035
	.017	.782	.276	.145	.327	-.009

...continued overleaf

<i>Items</i>	<i>Factor</i>					
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
<i>The utterances (were)...</i>						
...had an after-effect	.254	.607	-.039	-.008	-.115	.199
	.218	.537	-.032	-.007	-.109	.196
	.293	.605	.258	.270	-.112	.252
...kept me in suspense	-.512	.576	.112	.157	-.095	-.025
	-.439	.510	.090	.137	-.090	-.025
	-.389	.634	.108	.328	-.000	-.025
...surprising	-.375	.479	-.075	.420	-.008	-.001
	-.321	.424	-.061	.367	-.008	-.001
	-.310	.586	.033	.503	-.000	.012
...beautiful	.066	-.026	.842	.006	-.045	-.002
	.057	-.023	.680	.005	-.043	-.002
	.471	.246	.868	.284	-.068	-.062
...brightened my face	-.026	.171	.720	-.013	-.116	.020
	-.022	.151	.582	-.012	-.110	.019
	.339	.387	.758	.295	-.104	-.022
...elegant	.007	-.080	.681	.230	.065	.033
	.006	-.070	.550	.201	.061	.033
	.357	.229	.728	.403	-.002	-.023
...allowed me to enjoy my feelings	.095	.121	.667	-.002	.097	-.067
	.081	.107	.539	-.001	.092	-.066
	.396	.344	.755	.246	.088	-.112
...pleasing	.377	-.099	.597	-.002	.035	-.005
	.323	-.088	.482	-.002	.033	-.005
	.647	.112	.742	.209	-.038	-.038
...enlightened my face	.203	.282	.318	.191	-.124	.025
	.174	.249	.256	.168	-.118	.025
	.423	.454	.564	.457	-.180	.033
...intelligible after thinking about it	-.002	-.032	-.017	.749	.084	-.146
	-.001	-.028	-.014	.655	.079	-.144
	.101	.230	.217	.712	-.077	-.145
...complex	.174	-.210	.080	.725	.044	.076
	.150	-.185	.064	.635	.042	.075
	.329	.092	.317	.697	-.165	.071
...charming	-.087	-.024	.383	.600	.023	.007
	-.075	-.021	.310	.525	.022	.007
	.196	.312	.522	.691	-.101	-.024
...emotional	.028	.111	-.018	.134	.891	.025
	.024	.098	-.014	.117	.844	.025
	-.092	.230	.061	-.023	.865	-.004
...rational	.193	.063	.005	.028	-.750	-.018
	.165	.056	.004	.025	-.711	-.017
	.323	.022	.135	.254	-.782	.028

cognitive representation of	-.037	-.045	-.168	.173	.141	.787
utterance content (sum scores	-.031	-.039	-.135	.151	.133	.777
of correctly identified MC-	-.068	.013	-.207	.072	.071	.791
items; speaker A, varied turns)						
cognitive representation of	-.096	.062	.155	-.263	-.084	.781
utterance content (sum scores	-.082	.055	.125	-.230	-.079	.770
of correctly identified MC-	-.012	.046	-.011	-.184	-.041	.769
items; speaker B, not varied turns)						

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*Note:* Each cell contains the standard regression coefficients (factor pattern, first row), the semipartial correlations (factor structure, second row), and the correlations (factor structure, third row).

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