Framed Writing of Argumentative Monologues by Sixteen-and Seventeen-year-old Students

CAROLINE GOLDER

Université de Poitiers
Laboratoire de Psychologie du Langage
86022 Poitiers Cedex
France

ABSTRACT: When 16- and 17-year-old students are required to write a framed argumentative text which first supports position A and then supports an opposing position B, the familiarity of the debated topic seems to determine the "argumentative quality" of the texts produced. Indeed, the possibility of getting personally involved in the discourse leads to more effective writing strategies and to the use of typical marks of argumentation.

KEY WORDS: Counter-argumentation, psycholinguistic operations, text, argumentative marks.

At what age and under what conditions do children exhibit argumentative abilities? Some say very early, others say much later. Many studies, mostly those inspired by Piaget's work, consider argumentation to be a relatively complex behaviour which is acquired late. The studies by Berkowitz are certainly the most representative of this line of thinking, in which it is believed that before the formal operations stage (approximately age eleven), children do not possess adequate argumentative skills for engaging in "reasoned dyadic interaction" (Berkowitz and Gibbs, 1983, 1985; Berkowitz, Oser and Althoff, 1987). Berkowitz *et al.*'s analysis of argumentative text[1] produced by children aged six to twelve led to the conclusion that ten- and eleven-year-olds are incapable of producing "convincing justifications". Conflicts appear to be resolved at that age "by power manipulations, either physical or verbal, but without recourse to collaborative justified discourse" (Berkowitz, Oser and Althoff, 1987, p. 337). This "argumentative incapacity" is assumed to be related to the degree of self-centering in children (inability to consider another person's point of view).

Over the past fifteen years, however, a certain number of American psychologists have openly opposed this viewpoint and more so, the neo-piagetian viewpoint in general. The mere "unsuitability" of the argumentative situations tested in the Berkowitz studies (in particular, the unfamiliarity of the proposed topics) is thought to be sufficient to cause the children's failure. Indeed, for Berkowitz' opponents, two crucial variables in the study of child argumentation are *how familiar* and *how interesting* the proposed topic is: when the topic is familiar and the children are motivated (have an incentive), even

Argumentation **7:** 343–358, 1993.

five-year-olds are capable of devising complex arguments and producing logical, coherent reasons for the position they are defending (Stein and Trabasso, 1982). Furthermore, when presented with a conflicting situation between two persons and asked to take sides with one of them, they are capable of coherently justifying their choice. Even though they may not be able to grasp all aspects of the opponent's reasoning, they can furnish one or two plausible reasons in support of the opposing point of view (Stein and Miller, in press a and b). During natural interaction, when children need to convince someone in order to get their way, for example, their argumentative capabilities are even more precocious. Indeed, children as young as age four not only justify their position, but also use diverse and numerous arguments, including bribery, promises, and threats (Eisenberg and Garvey, 1981; Genishi and Di Paolo, 1982; Weiss and Sachs, 1991). Even if at this stage their arguments are not yet "receivable" ones (see Golder, 1992a, for the notion of receivability), we know that children will gradually develop a greater sense of the acceptability of their arguments (transition from a "conventional morality" to a "collective morality"; Miller, 1986, 1987).

The crucial factor here is **the nature of the argued topic**: children's argumentative discourse can only be elaborate when they feel concerned by the subject matter and personally involved in the debate. The Heinz dilemma used by Berkowitz and his collaborators is a very representative example of an unsuitable argumentative situation for children: (Should Heinz steal the medicine that he can't afford so he can save his wife's life?) Do the basic concepts underlying this dilemma (theft, money, marriage, etc.) really allow a 7- or 8-year-old child to come up with relevant justifications? It is not surprising that moral dilemmas like this one, which have been proposed in these allegedly piagetian studies, lead to illogical and idiosyncratic argumentation.

Psycholinguists have also stressed the importance of the topic, in the broad sense of the term (see the notion of referential space, defined as "non-linguistic, psychological representations that any human being is able to construct for all extra linguistic entities"; Bronckart, 1985, p. 27; our translation). The comparative study of formal topics (e.g. problems of weight, volume, and inertia conservation) and natural topics (e.g. whether children should be given an allowance) has shown that by age thirteen or fourteen, these two types of topics give rise to clearly different text: while natural discourse is marked by a high degree of speaker endorsement (I think ..., As for me, my parents ...), the subject does not get nearly as involved in formal discourse (Espéret, Coirier, Coquin and Passerault, 1987). The speaker's own point of view on a debated issue also seems to have a decisive effect on the text forms employed. In one study (Passerault and Coirier, 1989), subjects who were either for, against, or noncommittal with regards to capital punishment were asked to write an answer directed at someone else (who was for or against capital punishment) showed extensive speaker involvement only when both speaker and addressee were highly opinionated.

The topic of debate, whether due to its degree of familiarity (the interest

it elicits in children) or to its polarization of points of view, is a determining factor in the textual operations implemented by the speaker.

The fact that the domain is or is not represented as *highly controversial* is a second decisive factor in argumentative text elaboration. If the goal of argumentative discourse is indeed to modify the audience's beliefs and representations on a given matter (Grize, 1981, 1990), then the subject must be capable of perceiving a minimal amount of contradiction between the different positions. Indeed, one does not frequently attempt to convince another person who has the same opinion as one's own (see the legitimacy conditions for argumentation described by Charolles, 1980). Argumentation can only take place in a conflicting situation in which the positions of the participants are initially incompatible: "In order for an argument to begin, both opponents must recognize that they have conflicting goals. [...] If either party is unaware of the conflict, then an argument cannot be initiated" (Stein and Miller, in press a). Indeed, deliberative discourse in argumentative form is not necessarily true argumentation. If the speaker is simply stating or explaining the reasons for his or her choice rather than attempting to change the audience's beliefs, the resulting discourse is not considered here to be argumentation *per se*. But if the parties do indeed try to persuade each other of the soundness of their respective standpoints, then there is in fact disagreement, and thus, argumentation. To our knowledge, few studies have addressed this issue despite its relevance to the study of argumentative discourse, viewed as a behavior aimed at modifying another individual's opinion: to refute someone else's point of view, one must take that point of view into account.

In a dialogue situation, if the conversation is to function correctly and a compromise is to be reached, the parties must develop argumentative cooperativeness (Golder, 1992b). This means incorporating the assertions of the other participant into one's own discourse. In a written situation, on the other hand, it is quite difficult to consider and integrate opposing points of view. The constrained counter-argumentation task designed by Brassart (1988) is very useful for examining this problem. When students aged 11 or 12 (as well as adults) were asked to include two opposing points of view ("Cars are practical for getting around vs. It is obvious that nowadays, the train is the best way to travel long distances") to debate a controversial issue, the texts produced contain many counter-arguments and an extensive amount of elaborate argumentation (presence of arguments and counter-arguments for both positions). This result is quite unexpected, given the pessimistic conclusions drawn by most psycholinguists: it has been assumed so far that the argumentative text type is not acquired until age 13 or 14 (Golder, 1992c; Schneuwly, 1988) or even until age 16 or 17 (Pieraut-Le Bonniec and Vallette, 1987). It is likely that the initial provision of the two opposing positions in Brassart's (1988) experiment with the constrained counter-argumentation task considerably facilitated the production of counter-argumentative texts (elaborate argumentation).

Based directly on the Brassart study, we attempted to answer two questions:

(1) Does the nature of the debated topic (whether or not it incites writers to

get involved in their assertions) have an influence on the organization and types of arguments given, as well as on the degree of argumentative elaboration?

(2) Does text organization and elaborateness depend on the degree of incompatibility between the positions to be supported?

The present study was conducted in a psycholinguistic perspective. It deals with the way in which subjects "make their texts work" through the use of linguistic devices specifically designed to reach a particular communicative goal: argumentation. Our idea was not to describe the usage and effects of various argumentative expressions, as did Champaud and Bassano (in press). The concept of "language behavior" (Espéret, 1989; Coirier, Coquin-Viennot, Golder and Passerault, 1990) is crucial here: the characteristics of the production situation (Bronckhart, 1985) and more specifically, of the referent, are considered to determine what language operations are performed. These operations are manifested on the surface by the presence of characteristic linguistic marks, and more precisely, by the presence of characteristic configurations of marks[2] (Golder, 1992c).

The constrained counter-argumentation task called "Alpha-Omega", developed by Brassart (1988), appears to be a good task for precisely assessing the effects of the referent on text forms and argument organization. In this task, subjects complete an essay in which the first and final sentences are already provided. These two sentences represent opposing points of view on the topic of the essay. For the experimenter, the advantage of this task is that it forces subjects to engage in elaborate argumentative discourse in a relatively simple and controlled situation. Indeed, many experimental devices used to induce argumentative behavior are so complex (resolving a conflict in an interactive situation, for instance) that they are difficult to control, making the linguistic forms produced difficult to interpret. In the Alpha-Omega task, subjects have a limited amount of space to "prove themselves": they must search for and incorporate arguments which enable the transition from Alpha to Omega, while still arguing in support of Alpha. The punctuation in the text (a colon following Alpha) forces the subjects to start with at least one argument in favor of the initial position. Although this task constrains essay content in two ways (the essay must include both Alpha and Omega, and must start with Alpha), it also guides the subjects by "framing" the writing task (Brassart, 1988). Moreover, the "argumentative monologue" situation appears to be more conducive to elaborate argumentation, due to the fact that a writer does not have to deal with turn taking and thematic continuity as in a dialogue situation (Golder, 1992d).

Our objective was threefold:

(1) Validate the analyses and classifications proposed by Brassart. In other words, can the writing strategies observed by this author account for the way children perform the task when they write about a different referent?

(2) Complete Brassart's analyses by introducing new linguistic indices: in addition to writing strategies, can we find evidence of typological argumentative operations? Our focus is mainly on the operations used to express speaker involvement, which appear to be characteristic of argumentative discourse,

whether oral (Golder, 1992b and c) or written (Espéret, Coirier, Coquin and Passerault, 1987).

(3) Qualify Brassart's results according to the type of referent: a topic which by nature encourages the subject to "get on stage" should lead to greater argumentative writing success. A subject who is personally concerned with or involved in an issue is aware of the various arguments and counter-arguments for each opposing opinion, and should therefore be better at incorporating them into a counter-argumentative essay. In contrast, a low-involvement topic requires the manipulation of commonly-accepted ideas (see Vigner, 1990, on this subject) which are often poorly mastered and thus difficult to manage coherently. In texts with high-involvement referents, the speaker's involvement should be reflected by the linguistic forms used. As for the degree of argumentative incompatibility between the two statements provided to the subjects, a high degree of incompatibility should trigger more effective argumentative discourse, due to the fact that the two statements should help subjects consider the opposing points of view. In contrast, a low degree of incompatibility should lead subjects to state adequate arguments in favor of each of the positions (inclusion of moderate arguments) without really leading to the development of genuine counter-argumentation.

Sixteen- and seventeen-year-old subjects were chosen because students at this age appear to have mastered the argumentative text type. Indeed, it is legitimate to assume that lack of skills in argumentative text writing could mask the effects of the variables tested.

METHOD

Experimental Setup

Thirty-two students aged 16 and 17 participated in the experiment during a language arts class (French). They were asked to write an essay beginning with sentence A and ending with sentence Z. Sentence Z expressed the opposing point of view to sentence A. The instructions, written at the top of the individual answer sheets, asked the students to "write an essay which includes both the initial and final positions and links them into a coherent whole." The space for ten lines of text was provided on the answer sheet. Subjects were given one hour to write four essays, one on each of the following topics:

I^+O^+ High-involvement topic / Strongly-opposed positions
Adolescents should be able to go out whenever they wish:
...
It is clear that parents should have control over their children's social life.

I^+O^- High-involvement topic / Weakly-opposed positions
In this day and age, television can be very informative for

teenagers:

...

You can see that reading can provide students with information on matters that interest them.

I^-O^+ Low-involvement topic / Strongly-opposed positions

Donations to charity are the best answer to the problem of hunger in the world:

...

You can see that on-site technical assistance for needy populations is the best solution to world hunger.

I^-O^- Low-involvement topic / Weakly-opposed positions

Politicians play an important role in today's society:

...

You can see that all members of society actively participate in its operation.

The testing order for the four topics was counterbalanced across subjects.

The topics proposed had been selected by ten judges (adolescents from another class, and thus, comparable to the subjects in our sample). The judges were asked to assess the degree of incompatibility between the two positions ("Do you think these sentences could have been written by the same person in the same text?") and the degree to which they felt involved by the proposed issue ("Do the issues raised in these sentences concern you personally?"). The incompatibility ratings were made on a 5-point scale ranging from 1 (I am almost sure) to 5 (certainly not). The mean ratings obtained were 3.2 and 3.5 for I^+O^+ and I^-O^+, respectively. The ratings dropped to 2.4 and 2.0 for I^+O^- and I^-O^-. The degree of involvement was rated on a 4-point scale ranging from A (very much) to D (not at all). The topics proposed in conditions I^+O^+ and I^+O^- were judged to be essentially high-involvement (10/10 and 8/10 subjects, respectively, answered A or B); I^-O^+ and I^-O^- topics were judged as essentially low-involvement (in both cases, 7/10 subjects answered C or D).

Criteria for Essay Analysis

1. Analysis of Writing Success

A brief description of the typological text families will be given below. The principles described by Brassart (1988) were strictly followed in this analysis. For more details, the reader may wish to consult the Brassart article directly.

The essays produced were classified into three families on the basis of handling complexity and relevance to the problem posed (examples of a text in each family are given in Appendix 1).

Unsuccessful text family. Texts classified as "unsuccessful" where those in which the writing problem posed was not solved (i.e. the subject did not do what the instructions required). Either the text was not argumentative, i.e. did not contain arguments for either position (in our corpus, these texts were usually

accounts of life experiences) or the final position was totally ignored (only arguments for the initial position were stated).

Partially successful text family. In these texts, the writing problem was only partially solved, since they included no arguments for the initial position A (pro-A arguments should have followed the colon), starting either with an argument supporting final position Z or an argument against Z (at least one argument for A should have been given first).

Successful text family. These texts correctly solved the writing problem. The subjects who wrote them managed to handle arguments against A while directing their argumentation towards Z.

2. Analysis of Speaker Involvement

A writer's involvement in his/her text appears to be an important measure in that, unlike other kinds of discourse, it is impossible to produce written argumentative discourse without including at least one mark of one's role as a speaker who is taking a stand (I am only referring here to everyday, "natural" argumentative discourse, not advertising and publicity). Argumentative discourse may contain narrative parts, but these parts are always related to at least one identifiable position; they are oriented towards a conclusion and have a common communicative goal, i.e. to alter the beliefs of the audience. This does not mean that argumentative discourse can be reduced to a single operation, that of speaker involvement. Obviously, other operations (such as supporting and justifying; see Coirier and Golder, in press) are also essential. Furthermore, speaker involvement can be expressed via other linguistic means than the ones studied here. It would be difficult to draw up a complete list of all discursive devices used to express speaker involvement, so I shall limit the present study to the most frequent marks found in the argumentative texts of prior studies (Coirier, Coquin-Viennot, Golder and Passerault, 1990; Espéret, Coirier, Coquin and Passerault, 1987; Golder, 1992a, 1992b).

Enunciative involvement: negotiation. This is the distance the speaker establishes between him/herself and the discourse. This distance varies, such that the potential addressee is allowed a variable amount of room for negotiation. Enunciative involvement can be marked by means of verbs of speaker endorsement and expressions of propositional attitude ("I think, I believe, I find, in my opinion," etc.) or by expressions of modality. The latter are so numerous that an exhaustive list cannot be provided here, so the present study deals only with modal forms of certainty ("maybe," "surely," etc.), intensity modals associated with judgments or axiological expressions ("that's completely ridiculous, that's really too bad"), and modal conditions ("we could at least make an effort"). Finally, negotiation can be expressed by restriction-specification of a previously made judgment ("especially in the case of, that's only true if", etc.) The number of essays containing at least one occurrence was noted for each of these devices.

Taking a stand: speaker's judgments. The writer can take a stand either by explicitly expressing agreement or disagreement with the positions presented

("as for me, I'm against ..."), by the use of prescriptive statements indicating obligation ("one should, one must", etc.), or by making value judgments or granting a truth value via axiological forms ("it's good, it's wrong, it's stupid", etc.). The essays produced were be checked for the presence of at least one occurrence for each of these three devices. *Referential involvement: staging.* Referential involvement is the status the writer grants him/herself with respect to the discourse referent. The types of arguments produced are a reflection of the speaker's involvement: either the subject gets involved in his/her text via personal forms ("I go out whenever I want, which is normal since I'm nearly old enough") or collective forms ("We adolescents should be able to decide for ourselves, even if we sometimes make mistakes; we've got to learn our lesson), or does not get involved ("Politicians do whatever they feel like doing; they couldn't care less about society). Due to the wide variety and large number of arguments found in any one essay, the following rule was used to rate the texts for this variable:

- Essays containing only general arguments, whether facts or judgments, will be called "general argument" texts.
- Essays containing at least one argument referring to a personal experience (me, my parents) or a group experience (we adolescents) will be called "collective argument" texts. The subject is considered to identify with group opinions when a personal pronoun precedes the noun (we children).

A single occurrence of the second type of argument suffices for a text to be rated as collective. Indeed, at age 16 or 17, it is rare to find texts which are built totally around the personal mode of expression. When a writer gets involved in the text, it is usually via the use of one or two references to a personal or group experience.

Note that these two types of text are complementary, i.e., if an essay is not qualified as a general argument text, it is necessarily a collective argument text, and vice versa.

RESULTS

1. Preliminary Remarks

Out of the 128 possible texts (32 subjects, 4 topics each), 12 were not produced at all (these were spread across the 32 subjects, i.e. only one subject failed to write two of the four essays proposed). Note that 60% of these non-responses were found in situation I^-O^-, and 30% were found in I^-O^+. Given the ample amount of time allotted, the non-responses can be considered as an initial reflection of the subjects' difficulty writing about low-involvement topics. Analysis of the mean number of words in each experimental condition supported this interpretation: essays written in situations I^-O^- and I^-O^+ were always shorter (64.16 words and 70.21 words, respectively) than those written in I^+O^+ and

I^+O^- (82.12 and 92.22). No order effects were observed on essay length, mark frequency, or writing success.

2. Writing Effectiveness

Analysis of the success rate for each subject revealed that more than 30% of the students produced unacceptable essays on two out of four topics. Thus, even at age 16 or 17, subjects still appear to have a certain amount of difficulty writing a counter-argumentative text.

Looking at Figure 1, which shows the frequency of the three typological families in each experimental situation, we can make the following statements:

- While situation I^+O^- seems to have been the most favorable to effective writing (more then 70% of the essays produced were in the successful family), the I^-O^+ situation seems to have been the most difficult (more than 50% of the essays were unsuccessful). The frequency of successful texts in I^+O^- was significantly higher than in the other three situations ($X^2_1 = 5.19$, $p < 0.10$ by comparison with I^-O^-; $X^2_1 = 10.73$, $p < 0.01$ with I^-O^+; and $X^2_1 = 7.63$, $p < 0.05$ with I^+O^+).
- The high-involvement topics always had a better success rate than the low-involvement topics ($X^2_1 = 7.49$, $p < 0.05$).
- Weakly-opposed positions led to a higher success rate, regardless of the nature of the topic under debate ($X^2_1 = 11.25$, $p < 0.05$).

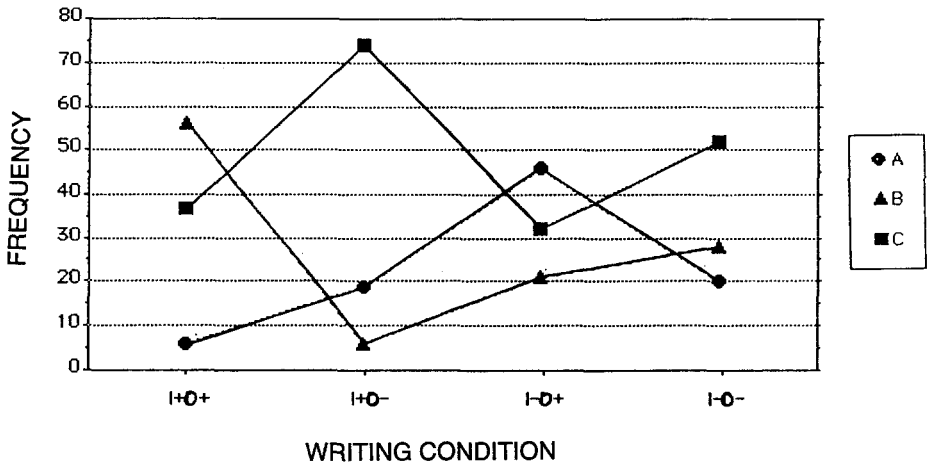
Thus, subjects seem to be better able to solve the writing problem when the proposed topic refers to a known argumentative domain. Indeed, adolescents often have "heated" arguments with their parents concerning whether they can go out or watch television late at night, for example. The high stakes implicated in such arguments provide the incentive for the teenagers to find arguments, and especially to come up with counter-arguments, to combat those set forth by their "opponents". These arguments were already available for the essay writing task proposed here, leaving only the problem of incorporating them into the texts.

Weakly-opposed points of view also seem to have facilitated the writing task. Indeed, the excessively strong contradictions required a complete reversal of opinion which the students may have been unable to handle for linguistic reasons, and probably for cognitive reasons as well.

Finally, note that in the low-involvement situations (the least "favorable" of all situations), no correlation was found between the lengths of the essays and writing success. The personal involvement factor thus seems to influence both text length and writing success, but a causality relation does not appear to exist between these two variables.

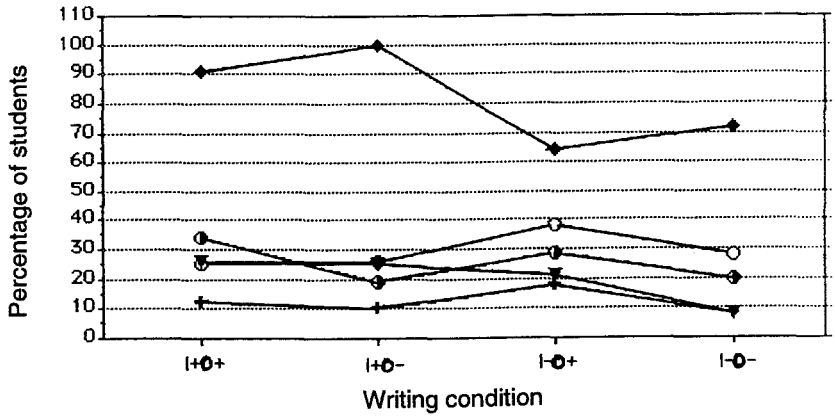
3. Marks of Speaker Involvement

Marks of negotiation. Examining Figure 2 (proportion of students who used a given mark at least once), we can see that restriction-specification was highly prevalent: 60 to 70% of the students used this device in I^- situations. The



A: unsuccessful texts; B: partially successful texts; C: successful texts; I^+: high-involvement topic; I^-: low-involvement topic; O^+: strongly-opposed positions; O^-: weakly-opposed positions.

Figure 1. Frequency of the three typological families, by writing condition.



Marks of negotiation: ◑: speaker endorsement; ○: certainty modals; ▼: intensity modals; +: conditional modals; ♦: restriction-specification; I^+: high-involvement topic; I^-: low-involvement topic; O^+: strongly-opposed positions; O^-: weakly-opposed positions.

Figure 2. Percentage of students who used at least one mark to express negotiation by type of mark and writing condition.

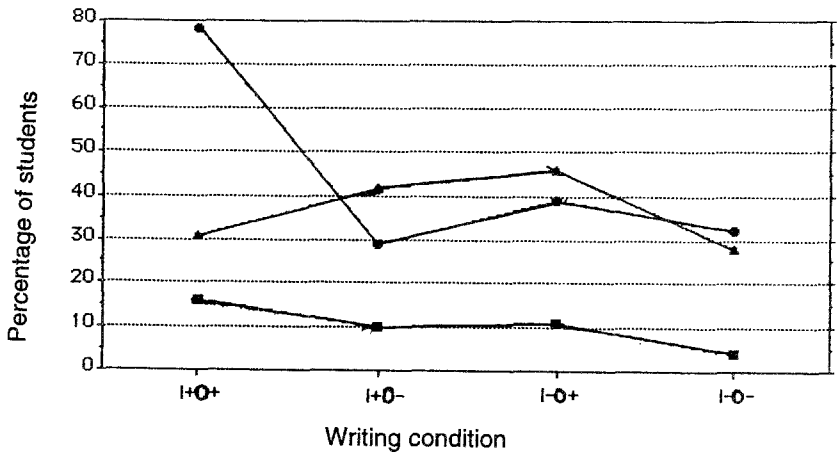
proportion reached 90 to 100% in I^+ situations. The other marks of negotiation were not used extensively, i.e., at least not any more than in non-constrained argumentative text (see Golder, 1992c). Thus, the main technique used to solve

this "one-extreme-to-the-other" argumentation problem was limitation of the scope of the initial position. Note once again that I^+ situations (compared to I^-) included a greater number of restriction-specification marks ($X^2_1 = 18.38$, $p < 0.001$). This technique is most likely associated with task success; the similarity of the successful text curve (Figure 1) and the restriction-specification curve (Figure 2) is striking in this respect.

Now if we look at the marks of restriction-specification and speaker endorsement, we can see that the use of these two devices was mutually exclusive. Thus, "argumentative reversal" appears to be achieved by either restriction-specification of an initial position ('Adolescents should be able to go out whenever they wish, *but only during vacation periods*') or by "enunciative breaks" ('In this day and age, television can be very informative for teenagers, but *I think* other sources of information exist').

Analysis of the co-occurrences of the other negotiation marks did not indicate any particular effects.

Marks of speaker's position. Adolescents seem to express their point of view mostly through the use of prescriptive and axiological forms. Expressions of agreement/disagreement were only used by approximately 10% of the subjects, regardless of the experimental condition (Figure 3). These results are interpreted



Marks of speaker's position: ▲: axiological; • prescriptive; ■: expressions of agreement/disagreement; I^+: high-involvement topic; I^-: low-involvement topic; O^+: strongly-opposed positions; O^-: weakly-opposed positions.

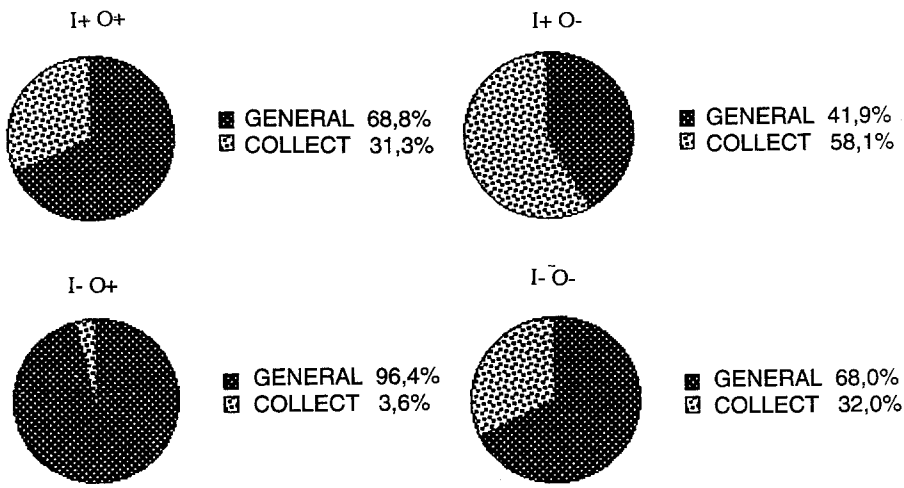
Figure 3. Percentage of students who used at least one mark to state their position, by type of mark and writing condition.

in terms of "decentering" or "removal" of the subject: it is no longer the writer him/herself who is taking a stand, i.e. **his/her own stand** ('As for me, I don't agree'), but an individual as a social group member speaking on behalf of the group (expressions like 'it's good' and 'one should' are backed by moral

standards which are accepted by the social group, and hence are "collective" values).

Note that subjects were inclined to take a stand mainly in O^+ situations. Comparison of the number of subjects who used at least one device of any kind to state their position in situations O^- and O^+ indicated a significant difference in favor of O^+ ($X^2_1 = 4.14$, $p < 0.05$). The transition from one position to a contradictory position thus requires taking a firm stand, which serves as a pivot point, and then interrelating various arguments and counter-arguments to it. In the case of weakly-opposed positions, the writer can settle for moderate arguments which do not require the statement of a firm position and can be followed by arguments in support of the opposing point of view. Recall on this point that in the O^- situations, unlike O^+, the judges felt that the two statements could not have been pronounced by the same person. It is understandable, then, that in order to incorporate two incompatible positions into a coherent text, the writer must mark (and make the reader aware of) the position he/she is upholding.

Marks of referential involvement. The proportions of general argument and collective argument texts for each writing condition are shown in Figure 4. (See definition on page 350: subjects can get involved either by "getting on stage" themselves or by putting their group on stage).



I^+: high-involvement topic; I^-: low-involvement topic; O^+: strongly-opposed positions; O^-: weakly-opposed positions.

Figure 4. Referential involvement. Percentage of general and collective arguments, by writing condition.

Situation I^+O^- seems to have been the most conducive to collective arguments: 58.1% of the essays contained a device marking the speaker's personal or group involvement. This percentage dropped to 3.6% in situation I^-O^+. Thus, in order for the subject to get involved in the discourse, the topic had to be conducive to such involvement, and the subject could not be required to go from one argumentative extreme to the other. When such a reversal of opinion was necessary (O^+ situations), the most prevalent writing strategy consisted of giving stereotyped, general arguments.

DISCUSSION AND CONCLUSION

As predicted in our initial hypotheses, a high-involvement topic led to effective writing and to the production of texts containing marks of typological argumentative operations (involvement/negotiation). In contrast, our hypotheses concerning the effects of statement incompatibility were not validated: highly opposed positions were an obstacle to the correct solving of the writing task problem. Note however that it is not customary to first defend a given opinion and then turn around and defend a strictly opposing one a few minutes later. The subjects would probably have been better at performing this writing task had the source of the opposing points of view been stated (e.g. 'The World Health Organization says that donations to charity are the best answer to the problem of hunger in the world: ... Politicians think that technical assistance [...]'). Marking of the source in this way would most likely have helped the students grasp the conflict, imagine the potential arguments and counter-arguments of each speaker, and thereby find a suitable solution to the problem. The constrained counterargumentation task requires mastery of elaborate textuality, i.e. manipulation of concession connectives, establishment of coherency, etc., but also, and no less important, it requires some important cognitive skills including integration of two diverging points of view (both of which might be different from the subject's) into a single perspective (which also might be different from the subject's). Incompatibility between the two positions thus made this task all the more difficult. The high frequency of expressions marking the speaker's position in the O^+ situations is in effect a reflection of the subjects' difficulty "situating themselves" with respect to a conflict they were supposed to resolve "from the outside". The subjects also had trouble coming up with arguments and counter-arguments; unfamiliar topics were probably the ones for which the subjects had the fewest available arguments ("degree of familiarity" and "knowledge of the domain" were not separate variables here). A tally of the number of different arguments used by the students would most likely have allowed us to differentiate between I^+ and I^- situations, although the short length of the I^- essays is probably already an initial indicator of the unavailability of arguments.

Except in situation I^+O^-, where the success rate reached 75%, these 16- and 17-year-old students seem to have experienced the same difficulty in executing

the Alpha-Omega task as the 11-and 12-year-olds in Brassart's (1988) experiment. Indeed, the success rates in the two studies were comparable (approximately 40%). It nevertheless does not appear legitimate to assume that the argumentative competency of children does not change between the ages of 11 and 17, especially since former studies have shown, on the contrary, that argumentative skills improve substantially between the ages of 10 and 14 (Espéret, Coirier, Coquin and Passerault, 1987; Golder, 1992b, 1992c). Two possible explanations can be proposed here to account for this discrepancy. First, even if no order effect was detected, the constrained production of four consecutive argumentative texts is probably somewhat of a lengthy task for 16- and 17-year-olds (the 11- and 12-year-olds in Brassart's experiment only wrote one essay). Second, writing strategies are not the only measure of argumentative ability. Analysis of the occurrence of marks of speaker involvement in the Brassart children's texts would probably have pointed out differences between the two age groups.

Finally, the results support our hypotheses concerning the function of certain text forms: collective arguments are indeed the trace of the speaker's involvement in his/her discourse (these occurred most often in I^+) and not of simple exemplification. Axiological and prescriptive forms are indicative of the stand being taken by the speaker (they serve as landmarks for the subject when the positions are contradictory).

Certain questions remain unanswered. Why did the O^+ situations lead to such a high rate of failure? A controversial argumentative referent was assumed to be an essential condition for the writing of counter-argumentative text. A more detailed analysis of the writing strategies used should provide some answers to this question. Perhaps one of the ways the students managed to resolve the strong argumentative conflict present in these texts was to let different actors take the opposing parts in the play:

At what age and under what conditions do children exhibit argumentative abilities? Some say *very early*, others say *much later.*

APPENDIX 1

Example of an unsuccessful text

Politicians play an important role in today's society: indeed, they lead the world and are there to manage their country, make it progress, operate. You can see that all members of society actively participate in its operation. (Caroline, tenth grade).

Example of a partially successful text

Donations to charity are the best answer to the problem of hunger in the world: but the best solution is teaching. It is better to teach people how to grow food than how to eat it. You can see that on-site technical assistance for needy populations is the best solution to world hunger. (Arnaud, tenth grade)

Example of a successful text

Politicians play an important role in today's society: indeed, they are the ones to enact the laws that run the country. The economy is impossible to manage without their knowledge. In addition, they build up trust between neighboring countries, whether or not they are allies. But politicians cannot act without us: we are the ones to appoint them; they ask us for our opinions on certain issues (referendums), and without our support, they would be nothing. You can see that all members of society actively participate in its operation. (Hughes, tenth grade)

NOTES

[1] The terms "argumentative text" and "argumentative discourse" are used here to refer to the same thing: that which is produced linguistically by a speaker or writer for the purpose of argumentation. Argumentative discourse is not considered to have a specific textual superstructure. The act of argumentation can be achieved through different text types (one can argue through narration), but all argumentative texts have one feature in common: they exhibit speaker involvement.

[2] The term "configuration" should be interpreted in two ways. First, a text cannot be considered argumentative unless it contains a certain set or configuration of characteristic marks; only one such type of mark does not suffice. Second, the same argumentative operation can be achieved by means of a different configuration of marks; for example, one's judgment can be expressed by making modal distinctions with forms such as *maybe* or *I believe*.

REFERENCES

Berkowitz, M. W., & Gibbs, J.: (1983), 'Measuring the developmental features of moral discussion', *Merrill-Palmer Quarterly* **29**, 399–410.

Berkowitz, M. W., & Gibbs, J.: 1985, 'The process of moral conflict resolution and moral development', in M. Berkowitz (ed.), *Peer Conflict and Psychological Growth*. In W. Damon (Editor-in-chief), *New Directions in Child Development* (Vol. 29, pp. 71–84). San Francisco: Jossey-Bass Inc., Publishers.

Berkowitz, M. W., Oser, F., & Althoff, W.: 1987, The development of sociomoral discourse, in W. Kurtines & J. Gewirtz (eds.), *Moral Development through Social Interaction*. New York: John Wiley & Sons.

Brassart, D. G.: 1988, La gestion des contre-arguments dans le texte argumentatif écrit chez les élèves de 8 à 12 ans et les adultes compétents. *European Journal of Psychology of Education* **4**, 51–69.

Bronckart, J. P.: 1985, *Le fonctionnement des discours: un modèle psychologique et une méthode d'analyse*. Neuchâtel: Delachaux et Niestlé.

Champaud, C., & Bassano, D.: (in press), 'French concessive connectives and argumentation: an experimental study in eight-to ten-year-old children', *Journal of Child Language*.

Charolles, M.: 1980, 'Les formes directes et indirectes de l'argumentation,' *Pratiques* **28**, 7–43.

Coirier, P., Coquin, D., Golder, C., & Passerault, J.M.: 1990, 'Le traitement du discours argumentatif: Recherches en production et en compréhension', *Archives de Psychologie* **58**, 315–348.

Coirier, P., & Golder, C.: In press, 'Production of supporting structure: developmental study', *European Journal of Psychology of Education.*

Eisenberg, A. R., & Garvey, C.: 1981, 'Childrens' use of verbal strategies in resolving conflicts', *Discourse Processes'* **4**, 149–170.

Espéret, E.: 1989, 'De l'acquisition du langage à la construction des conduites langagières', in G. Netchine (ed.), *Développement et fonctionnement cognitifs de l'enfant. Des modèles généraux aux modèles locaux* (pp. 121–135). Paris: Presses Universitaires de France..

Espéret, E., Coirier, P., Coquin, D., & Passerault, J. M.: 1987, 'L'implication du locuteur dans son discours: discours argumentatifs formel et naturel', *Argumentation* **1**, 149–168.

Genishi, C., & Di Paolo, M.: 1982, 'Learning through argument in a preschool', in L. C. Wilkinson (ed.), *Communicating in the classroom* (pp. 49–68). New York: Academic Press.

Golder, C.: 1992a, 'Mise en place de la conduite de dialogue argumentatif: la recevabilité des arguments', *Revue de Phonétique Appliquée* (in press).

Golder, C.: 1992b, 'Production of elaborated argumentative discourse: the role of cooperativeness', *European Journal of Psychology of Education* **7**, 49–57.

Golder, C.: 1992c, 'Argumenter: de la justification à la négociation', *Archives de Psychologie* **60**, 3–24.

Golder, C.: 1992d, 'Justification et négociation en situation monogérée et polygérée dans les discours argumentatifs', *Enfance* **46**, 99–112.

Grize, J. B.: 1981, 'Pour aborder l'étude des structures du discours quotidien', *Langue Française* **50**, 7–19.

Grize, J. B.: 1990, *Logique et langage.* Paris: Ophrys.

Miller, M.: 1986, 'Argumentation and cognition', in M. Hickmann (ed.), *Social and functional approaches to language and thought* (pp. 225–249). New York: Academic Press.

Miller, M.: 1987, 'Culture and collective argumentation', *Argumentation* **1,** 127–154.

Passerault, J. M., & Coirier, P.: 1989, 'Le marquage de l'implication discursive dans les discours argumentatifs: Les effets de l'interlocuteur', *Revue de Phonétique Appliquée* **90**, 35–47.

Piéraut-Le Bonniec, G., & Vallette, M.: 1987, 'Développement du raisonnement argumentatif chez l'adolescent', in G. Pièraut-Le Bonniec (ed.), *Connaître et le dire.* Bruxelles: Mardaga.

Schneuwly, B.: 1988, *Le language écrit chez l'enfant.* Neuchâtel: Delachaux et Niestlé.

Stein, N. L., & Miller, C. A.: in press a, 'The development of memory and reasoning skill in argumentative contexts: evaluating, explaining, and generating evidence', in R. Glaser (ed.), *Advances in Instructional Psychology.* Hillsdale, New Jersey: LEA.

Stein, N. L., & Miller, C. A.: in press b, 'A theory of argumentative understanding: relationships among position preference, judgments of goodness, memory and reasoning', *Argumentation.*

Stein, N. L., & Trabasso, T.: 1982, 'Children's understanding of stories: a basis for moral judgment and dilemma resolution', in C. Brainerd & M. Pressley (eds.), *Verbal Processes in Children: Progress in Cognitive Development Research.* New York: Springer-Verlag.

Vigner, G.: 1990, 'Argumenter et disserter: parcours d'une écriture', *Pratiques* **68**, 17–55.

Weiss, D. M., & Sachs, J.: 1991, 'Persuasive strategies used by preschool children', *Discourse Processes* **14**, 55–72.