Twenty-four eleventh grade students attending a month-long, summer civic-leadership institute in a Pacific Northwest city participated in a study that examined their dialectical reasoning on civic issues. This reasoning was elicited through written scaffolding, with students guided explicitly to compose essays arguing for or against a position on a given issue. The essays were organized so that the second and third paragraphs were related dialectically, while the first and fourth were a knowledge summary and conclusion, respectively. Scaffolding within paragraphs was less explicit. The essays were analyzed to discover use of six categories of dialectical reasoning: value claims, lines of support, relevant counterarguments, empathic counterarguments, lines of counterargument, and dialectical conclusions. Results indicated (1) that most students argued both for and against their position, (2) that most summarized what they knew about the issue without apparent interference from their own bias about it, (3) that most used only one line of reasoning, (4) that most wrote an empathic paragraph about the other side of the issue, (5) that most argued against their position using just one line of reasoning, and (6) that most did not show even incipient dialectical reasoning in the concluding paragraph. (Copies of four student essays and an extensive list of references are appended.) (FL)
DIALECTICAL REASONING ON CIVIC ISSUES

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ABSTRACT

In order to examine the elicitation and production of critical reasoning, twenty-four eleventh-grade students each wrote a scaffolded, dialectical essay on a selected civic issue. In the second and third paragraphs, they were asked to argue for and against their declared position on the issue. Twenty-two of the 24 students produced such essays. Their difficulties were simplistic arguments pro and con, non sequitur counterarguments, and concluding paragraphs that were not dialectical.
DIALECTICAL REASONING ON CIVIC ISSUES

From perplexity grows insight.
(Jaspers on Socrates, 1962)

This paper reports an exploratory study of adolescents' reasoning on civic issues. The first section introduces central concepts and considers related literature. The second details the study's method—an analysis of essays written on selected civic issues. The third gives and interprets the findings, and the conclusion proposes several hypotheses about dialectical reasoning on civic issues. To begin with conclusions, dialectical reasoning is central to critical thinking about civic matters and, in turn, civic betterment; it is, at least in elementary form, rather available and easily elicited; and there is good reason to suppose that it can be improved through instruction.

Problem

Perkins, Allen, and Hafner (1983) closed their study of practical reasoning with hypotheses that anticipate several of the issues in the present study:

A final point about a critical epistemology: if we are right in characterizing it as a matter of knowledge and know-how, it should be teachable. Teaching it would mean teaching quite different from conventional logic or statistical inference, and also quite different from debate. To inculcate a critical epistemology would be to train people to build understandings of situations by interrogating their own knowledge, and playing off different sorts of knowledge and intuitions against one another in order to evolve sounder models.
The present study was concerned to clarify just what a critical epistemology is, particularly in the domain of civic issues, and to examine how young people might reason in ways that are characteristic of it.

An understanding of critical epistemology begins with three distinctions: one between formal and informal problems, one between the kinds of reasoning brought to bear on these problems, and another between cleverness and genuine questioning. As for the first, formal problems are by definition well structured and monological. That is, sufficient information needed to solve the problem is given in its presentation and a single line of logic will render a solution. Consider these two formal problems, the first a version of the classic liars-and-truth tellers problem and the second a typical word problem.

In a certain mythical community, politicians always lie, and nonpoliticians always tell the truth. A stranger meets three natives, and asks the first of them if he is a politician. The first native answers the question. The second native then reports that the first native denied being a politician. Then the third native asserts that the first native is really a politician. How many of these three natives are politicians? (Copi, 1953, in Perkins, Allen & Hafner, 1983, p. 177).

Martha Lynn had 10 cookies. She ate four and then divided equally the ones she had left between her brother and her friend, Alan. How many cookies did she give away?

Although more information might be helpful, both problems can be solved without it. Moreover, a single solution is guaranteed when the reasoner executes properly a train of deductive reasoning.

Informal problems are of a different nature and call for a different
sort of reasoning. Briefly, they are ill structured (Simon, 1973; Voss, Greene, Post, and Penner, 1983) and multilogical (Paul, 1987). Much information that would be helpful in reasoning one's way to a solution is not given in the problem presentation, and conflicting logics, which may be unto themselves whole and utterly reasonable, can be brought to bear. In other words, "premises are not fixed and inferences are not perfectly reliable" (Perkins, 1986, p. 3); consequently, various solutions are possible and, given more than one reasoner, controversy is likely.

Consider these informal problems:

1. Was the United States justified in using the atom bomb on Japan?
2. Is it right to lie in order to protect a friendship?
3. Should the local parish be permitted to provide sanctuary for illegal immigrants from Central America?
4. Will tax breaks for investors "trickle down" to the poor?
5. Should 7-11 stores sell Playboy and Penthouse magazine?

On any of these issues, a reasoner may introduce new information at any point in the reasoning and, more sweeping than this, have a change of mind -- that is, a reasoner can shift from one logic to another and see the problem in an altogether new light. American History teachers witness both occurrences frequently enough when students are discussing the first of the issues above. New information is typically introduced as the discussion progresses (e.g., projections of the number of casualties both sides would have sustained had conventional arms been used in an invasion of the island). And, students are often divided roughly into three logics:
Unconditional opposition to nuclear weapons use (e.g., "We shouldn't have dropped those bombs even if doing so actually saved lives in the long run. Their effect is just too indiscriminate."), conditional opposition (e.g., "If more lives were saved by using the bomb, then I guess it was right." Or, "If the other side introduces them into a conflict, then we have to respond in kind."), and those who generally advocate using the most powerful weapon available, whatever the circumstances.

Informal problems, then, are by nature controversial and fuzzy. They crisscross multiple categories, points of view, and values; are entangled in ancillary problems; and are tied to diverse bodies of knowledge with which the reasoner may have only limited familiarity and to which no connection may be perceived. Consequently, reasoning on such issues is not so much problem solving (at least not as the term is usually used in formal reasoning to imply a linear and orderly procession from hypothesis to conclusion) as it is model building. Because premises are not given, they must be constructed as the reasoner goes along. And, they may be revised or abandoned outright as the reasoner acquires new information, or devises or is exposed to different and somehow compelling logics. There are often no formal, or technical, rules by which this construction and revision can be managed nor by which general principles can be applied to the particulars of the issue at hand. The difficulties in this sort of reasoning, then, are not only the tasks of building up an adequate information base and avoiding logical fallacies but, more demanding still, the task of constructing adequate models of the situation being reasoned about.
Central to this construction, and what is considered here a critical attribute, is the exploration of competing logics (frames of reference; points of view). This is dialectical reasoning. It may occur in many forms—in discussions and debates, in writing, and "inside our own heads," so to speak, as we set differing points of view against one another dialectically. This sort of reasoning confronts the reasonableness of one logic with the reasonableness of others with reference to criteria that are not indigenous to any one of them. Consider, for example, discussants who are wrestling with multiple logics on the fifth problem above. A reasoner espousing a free market point of view might advocate letting consumer demand decide whether such products should be supplied. Contrast that with a feminist logic, which might oppose the sale of pornography regardless of its market value, asserting that it degrades women; or a civil libertarian logic, which might argue that consenting adults have the right to pursue their happiness even if in ways that others find offensive. Surely, there are other logics as well. Since reasoners on this (as any) issue are likely to be reasoning, perhaps unreflectively, from within one of the several logics available or imaginable, dialectical reasoning begins with the recognition that one does have a point of view. And, it amounts to interrogating one's own position and the logic that frames it.

Now, dialectical reasoning must be distinguished from cleverness, or sophistication, which typically has as its intent the shoring up of one's
position rather than the open activity of discovery. Emphasis on this distinction can be found in many traditions, East and West. In some Buddhist lineages (the Tibetan Kagyu, for example), it is found in the practice of "mindfulness" or "beginner's mind"—a way of being characterized by radical openness to experience and, with it, a rejection of what is regarded as the mind's inherent preoccupation with reference points used in its own defense (Fromm, 1960; Guenther & Kawamura, 1975). In the Western psychological tradition, this distinction is known in terms of, on the one hand, egocentricity, defensiveness, and confirmation bias, and, on the other, rationality. Either way, it is a distinction based on the recognition that no demanding cogitation nor developed sensibility is required in order to have and defend an opinion. People need no special training to think they are right. Humans are by nature egocentric and ethnocentric, and neither the accumulation of knowledge nor the mere passage of time seem to overcome them (Kohlberg, Levine, & Hewer, 1984; Perkins, 1985a; Piaget, 1965; Ross and Anderson, 1982). To the contrary, even advanced knowledge can attach to what remains a defensive intellectual core, leaving reasoners perhaps more clever, more capable of justifying skillfully their initial positions on issues, but not necessarily more open than a child in genuine inquiry and criticism. Here is Socrates's disdain for the sophists.

Elaborating this point, we might consider three kinds of thinking: vulgar, sophisticated (sophist-icated), and critical (Paul, 1987, after Mills, 1962). Vulgar thinkers artlessly and without reflection assert and defend their opinions on issues, and do so from within the confines of
their present frame of reference. Slogans and prejudices prevail. Sophisticated thinkers do roughly the same, only artfully. Though their assertions and refutations may be without logical fallacy, egocentricity governs their thinking, and their intent is still to win. Critical thinkers are different. Their thinking has been freed, relatively speaking, from the need to be right; consequently, they can explore rather than only defend.

They are capable of learning from criticism and are not egocentrically attached to their point of view. They understand it is something to be developed continually (dialectically) and refined by a fuller and richer consideration of the available evidence and reasoning through exposure to the best thinking in alternative points of view. (Paul, 1987, p. 138)

Though these are idealized types, they assist with the distinction we are trying to make—that skilled thinking is not much of a gain over vulgar thinking if it is yet dedicated to defending early-taken positions. Genuine inquiry requires a genuine opening, and this amounts to "an active effort to interrogate one's knowledge base in order to construct arguments pro and con" (Perkins, Allen, & Hafner, 1983, p. 186; see also Gadamer, 1985).

It should be apparent by this point that the various problems typically under the social studies rubric—civic issues, public policy issues, social problems, public controversies, moral dilemmas—are problems of the informal type. While these should not be collapsed (there are important differences among them), they do share characteristics that make them informal problems and, as such, appear to require the particular sort of
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reasoning--situation modeling and, especially, dialectical reasoning--described above and investigated in this study.

Of course, there has been in social studies education a vigorous tradition of inquiry [if not instruction (Goodlad, 1984; Morrissett, 1982)] on the development of student reasoning on these problems (Beyer, 1985; Cherryholmes, 1982; Cornbleth, 1985; Engie, 1960; Fair & Shaftel; Fenton, 1967; Giroux, 1978; Giroux & Penna, 1979; Hunt & Metcalf, 1968; Kohlberg, 1973; Newmann & Oliver, 1970; Shaver & Berlak, 1968; Taba et al., 1971). Indeed, the 13th Yearbook of the National Council for the Social Studies was in 1942 already calling critical thinking a longstanding goal of instruction in social studies (Anderson, 1942). So the present study introduces no new concern; like the others, it regards the chief mission of social studies education to be an intellectual one with practical, ethical intent: civic betterment. Rather, the contribution of the present study is a narrowing from this broad concern to what we regard as a central and largely ignored aspect of critical thinking on civic problems: the development of dialectical reasoning. By narrowing to this, we are focusing on a category that brings to the foreground the distinction between vulgar and sophisticated thinking on the one hand and a critical epistemology on the other.
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Method

This was an exploratory study in that its purpose was to generate hypotheses, not test them. While this feature alone would constitute this a grounded theory study (Glaser & Strauss, 1967), it was not, strictly speaking, since the categories used in its content analysis were derived theoretically rather than induced. This will be elaborated below.

Subjects

Subjects were 24 adolescents drawn randomly from 98 participants at a month-long, resident, civic-leadership institute conducted in the summer of 1986 in a city in the Pacific Northwest. All 98 were between the eleventh and twelfth grades; the age range was 16 to 18 years; 55% were female; 24% were minority (10% Asian, 6% Black, 6% Native American, 2% Hispanic). Application forms were distributed to schools and businesses throughout the state and, from written applications, a panel of eight community leaders selected 98 students according to stated criteria: caring about civic life, initiative, and ability to communicate clearly in writing. The selection panel also sought to obtain minority representation at a level greater than state proportions and a statewide demographic distribution.
Data

Examined were 24 four-paragraph essays written on one of two given issues on the first day of the institute. Students selected one of the issues knowing they would then write an essay on that issue.

#1 Should publishers of school books use language that includes both sexes, like person and people, and avoid man or men when appropriate?

#2 Should citizens be allowed to voice their opinions even if they disagree with the government?

Written directions were given as follows:

INSTRUCTIONS: Put a check beside the issue you will write about. You will write a four-paragraph essay about the issue you have checked. Each paragraph should be approximately 1/4 to 2/3 of a page long. Each paragraph has a particular purpose:

In paragraph one, you are to summarize what you know about the issue.

In paragraph two, you are to state your position on the issue and give the reasons for your position. In other words, state your position and then support it.

In paragraph three, you are to give as best you can the counter-argument. In other words, give the other side's reasoning on this issue.

In paragraph four, write a conclusion.

Begin writing on the next page. Use a separate sheet of paper (blank sheets provided) for each paragraph. You do not have to fill up the whole page.
The purpose of this study was to analyze the dialectical reasoning of adolescents. That reasoning first had to be elicited. This was accomplished with a variation of scaffolding, or metacognitive guidance (Greenfield, 1984; Perkins, 1986; Vygotsky, 1978; Wood, Bruner, & Ross, 1976). This technique encourages reasoners to perform in ways they otherwise might not; consequently, it expects better performance than would occur were the same students to attempt the same task without guidance. Rather than simplifying the task, scaffolding holds the task constant while intervening to help the student accomplish it. Typically, scaffolding is an oral interaction, with novice and guide both present, in which the novice is nudged along just enough to maintain adequate performance and progress. In the present study, only the novice was present, so the scaffolding, such as it was, was accomplished through written instructions.

Two levels of scaffolding were present. At the essay level, students were guided explicitly to compose paragraphs such that the second and third were related dialectically, while the first and fourth were a knowledge summary and conclusion respectively. At the paragraph level, less scaffolding was present. Put another way, scaffolding within paragraphs was less explicit than scaffolding for the whole essay. In the instructions above, note that students are not helped with either the summary or the conclusion. And in the second and third, they are not guided beyond the basic purpose of the paragraph, not guided, for example, to use multiple lines of reasoning in each paragraph. By varying the degree of scaffolding
in this way, we then had the opportunity to analyze student reasoning both in the presence and absence of explicit scaffolding.

The form of scaffolding used here has the attraction of situational validity in conventional classroom settings: Writing essays according to a teacher-given format is not an uncommon school task—both for students learning to write essays and for those using essay formats to express their thinking on given or chosen topics. Since a burgeoning literature on intelligence in general (e.g., Gardner, 1976; Lerner, Hultsch, & Dixon, 1983; Sternberg, 1985), and thinking skills in particular (e.g., Baron & Sternberg, 1987; McGuire, 1985; Parker, in press), is pointing to the task- and domain-dependent (i.e., contextual) character of cognitive performance, it seems not only reasonable but desirable to study that performance in context. Put differently, as long as the thought specimens examined in this study were understood to be task dependent, it was desirable that they should be dependent on tasks that made sense in actual teaching/learning settings.

Several questions guided the analysis of essays. First, was the scaffolding successful? That is, did these writers construct a four-paragraph, "bothsides" essay? Second, was the first paragraph the summary requested, or was it more of an introduction to the second paragraph—a preliminary myside argument? Third, did the second paragraph contain a reasonably complex argument for the writer's position (instructions requested "the reasons for your position"), or was it merely a statement of the writer's position, or a position and a simple support? Fourth, was the third...
paragraph (the "otherside" argument) reasonably cogent? Three subquestions regarding cogency were: (a) Did the content of the third paragraph connect meaningfully to the second, such that it provided a counterargument(s), or was it a non sequitur? (b) Was this counterargument at least somewhat empathic? That is, did the writer endeavor to represent coherently and fairly the counterargument, perhaps capturing its logic? (c) Was it at least as complex as the myside argument given in the prior paragraph?

Fifth, did the fourth paragraph contain dialogical reasoning? That is, did the writer compose a conclusion that merely argued again the logic of the myside argument in paragraph two, or did the conclusion contain a broader logic--something of a synthesis of the opposing logics, or one that at least mentioned the counterargument(s)?

A content analysis (Holsti, 1969) was conducted using six categories deduced from the conception of dialectical thinking outlined above. Per these categories, better dialectical essays are distinguished from worse in six ways: (1) The first paragraph is a background summary of the issue and contains, relatively speaking, none of the author's opinions on the matter; (2) The second paragraph expresses the author's position and more than one line of supporting reasoning; (3) The third paragraph argues against the position expressed in the previous paragraph, using more than one line of counter reasoning; (4) The counterarguments in the third paragraph are related to the reasons given in the second and (5) are presented empathically, that is, without apparent intent to garner support for the author's position. Finally, the concluding paragraph is dialectical within
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itself—it does not merely give the author's position and reasons, but at least acknowledges the existence of counter reasoning.

CATEGORY A: VALUE CLAIM. A value claim is a statement in paragraph one expressing the author's belief about what is important, good, right or worthwhile—about an end state worth or not worth attaining. In contrast to knowledge claims, which state what the author considers to be true (factual) and which can be more-or-less verified empirically, a value claim expresses a judgment (i.e., opinion) that cannot, as a judgment, be verified. An example of a statement not classified as a value claim is, "Citizens in communist countries do not have the opportunity to voice their thoughts and ideas." The author is stating this as a matter of fact. An example of a statement classified as a value claim is, "The people of the United States are fortunate that they can demonstrate and voice their individual opinions."

CATEGORY B: LINE OF SUPPORT. A line of support is a reason given in paragraph two to justify the author's position on the issue. For example, a subject argued for free speech using two lines of support. The first drew upon the concept, popular sovereignty: "Government is made up of citizens." The second asserted that dissent is valuable because, "Disagreement can bring new, innovative ideas into society and can cause a society to do soul searching."

CATEGORY C: RELEVANT COUNTERARGUMENT. This category is concerned with the presence or absence of a semantic connection between the otherside
argument in paragraph three and the myside argument in paragraph two. What first had to be established was whether the third paragraph argument was counter to the position taken in paragraph two. If it was, the next determination was whether this counterargumentation was relevant to the particular line(s) of support given in paragraph two. For example, a line of support in paragraph two referred to "... the benefits of freedom of speech in generating new ideas for improving our system of government." The third-paragraph counterargument pointed to "... the problems that new ideas, which arise out of free speech, cause for our government." This counterargument was classified as relevant.

CATEGORY D: EMPATHIC COUNTERARGUMENT. The concern in this category is with the author's attempt to step into the shoes of those who might argue otherwise and to understand those counterarguments from within. The otherside reasoning in paragraph three was judged empathic if it was presented convincingly and without apparent myside bias. A good test for empathy was to read paragraph three before reading the author's first two paragraphs. An empathic third paragraph did not give the author's position and reasons and, if read alone, could be mistaken for the author's myside argument. In contrast, a non-empathic third paragraph was used as another forum in which to continue the myside argument; and, even though a counterargument might be mentioned, its treatment served the myside argument.

CATEGORY E: LINES OF COUNTERARGUMENT. A line of counterargument has the properties of a line of support, except that it counters rather than
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supports the author's position. The concern here was to determine how many different reasons the author generated that served to argue against his or her myside argument. Examples are given in the analysis below.

CATEGORY F: DIALECTICAL CONCLUSION. A fourth paragraph was judged dialectical if the writer acknowledged the existence of a counter-argument(s) or, beyond this, pointed to some aspect of the counter-argument(s) that was worth considering or, going still further, pitted against one another the myside and otherside arguments. Examples are given in the analysis below.

The reliability for mean ratings from the two raters on categories A, B, and E was .70, .83, and .52 respectively, using Ebel's formula for intraclass correlation (1951). On the dichotomous categories C, D, and F, the percentage agreement between the two raters was 61%, 95%, and 61% respectively. For all six variables, discussion among the raters brought the agreement to 100%.

FINDINGS AND DISCUSSION

As to the first question guiding the analysis, all subjects constructed a four-paragraph essay as directed and, though not without difficulties, all but two argued for and against their position on the selected issue (see Table 1; Appendixes A - D are sample essays). This may be the most important finding of the study. A form of dialectical reasoning, albeit
incipient, was elicited from 92% of the sample without benefit of prior instruction and by nothing more clever than a set of clear instructions. An examination of the other questions will elaborate this general finding.

QUESTION 2. Was the first paragraph a summary as requested, or was it more of a preliminary myside argument? In 11 of the 24 essays, the first paragraph contained one or more value claims in support of the writer's position on the issue (Category A, Table 1). A comparison of Karen's and Bill's first paragraph will illustrate (Appendixes A and B). Karen asserts over two sentences a knowledge claim about freedom of speech. Bill opens his paragraph with a knowledge claim and then moves to his myside argument. This leaves him without much more to say in paragraph two—indeed, he begins that paragraph with the phrase, "Like I stated before. . . " The key difference of interest here is that the first writer opened the essay without launching into her myside argument while the second did not.

This early opining can be interpreted in a number of ways: Perhaps these eleven reasoners were unable to separate their position on the issue from what they knew about it; that is, they were unable to distinguish their point of view on the issue from "the facts of the issue." Perhaps they had the ability to make this distinction but not the desire. Or, perhaps they had the ability but did not interpret the instructions as a request for a summary of knowledge claims rather than value claims. The first and third of these comprise what seems to us the best explanation. The general inclination toward egocentricity, or confirmation bias (constructing a one-sided—myside—model of an issue), would incline
reasoners to use the first paragraph as yet another opportunity to opine. Indeed, this is to be expected in reasoning that is not yet critical. While we are sensitive to the false fact/value dichotomy (Cf. Habermas, 1971), we believe that an aspect of dialectical reasoning is the ability and concern to distinguish justification from description—to know (relatively speaking) when one is and is not arguing one's position. Not knowing this was, in turn, probably a metacognitive shortfall in the writer that might be remediated through more explicit scaffolding: The instructions for paragraph one might be rewritten to read:

In paragraph one, you are to summarize what you believe are the facts about this issue. Be careful to avoid in this paragraph revealing your position and reasons for your position. That is what paragraph two is for.

QUESTION 3. Did the second paragraph contain a reasonably complex argument for the writer's position? The notion of complexity in the myside argument was defined operationally as the number of lines of support given for the position taken. This was an admittedly modest, but not unusual, conception (Cf. Toulmin, 1958). While most (15) writers offered just one line of support, six gave two, two gave three, and one gave four (Category B, Table 1). Of the four essays attached, three give one line of support, and Carol's (Appendix D) gives four. (Carol's essay is also distinguished by being one of only two essays written on the first issue.) A brief look at the four essays reveals that Karen, like the other 21 students writing on this issue, favors the right of dissent. Her justification, such as it is, argues that the government's function is to serve the people's "wants."
Bill's justification for the right of dissent takes a somewhat different turn—that citizens' public disagreements with government functions to reduce government power, thereby undermining government's capacity to serve itself rather than the people. Diane's reason is similar to Karen's—government is created and operated by the people, and so the people "have all the right in the world to do what they want with it..." Carol's position on the other issue is that publishers should continue using the words man and men even though men and women are equal and should be treated as such. She offers four reasons. First, important information (gender) would be lost were the neutral pronouns used; second, women get plenty of recognition already; third, costs of the changeover to neutral pronouns would be prohibitive; and, fourth, future leaders, using logic, will not be swayed by such things.

It should be noted that multiple reasons in the myside argument were not considered necessarily better than a single reason, particularly when a reasoner only mentioned superficially several lines of reasoning rather than developing one into a cogent position and justification. In model building on civic issues, however, alternative ways of seeing is of central interest, and we were concerned to examine alternatives within the myside argument itself as well as between it and the counterargument. That we found multiple arguments in 9 of the 24 myside arguments suggests, first, that this is not as rare a phenomenon as might be expected, even when not encouraged explicitly. (The scaffolding for the second paragraph was subtle, the only cue for multiplicity being the use of the plural reasons.)
Second, more explicit scaffolding for complexity probably would be fruitful. For example,

In paragraph two, you are to state your position on the issue and give a few reasons for your position. In other words, state your position and then support it with two or three different, good reasons.

QUESTION 4a. Did the counterargument connect meaningfully to the myside argument? The raters judged there to be four cases of connection between paragraphs two and three and 16 non sequiturs (Category C, Table 1). The two marked NA (non applicable) were not counterarguments at all but further myside reasoning. The samples attached will illustrate. Both Karen and Bill generated otherside reasoning, but neither argued against the particular myside reasons they had given earlier. By contrast, Diane's and Carol's third paragraphs were not merely arguments for the other side, but countered to some degree the particular reason(s) given in paragraph two. Diane had earlier argued that the government is "made and run by" the people. She now counters that reasoning by arguing that since the government is made and run by the people, who are they to complain? "Why should they disagree," she asks, "on what they have built for themselves?" Carol had earlier argued four reasons against neutral pronouns in texts, and the raters judged that she countered two of them: the second and fourth. She opposed the second by arguing that even though the first thing immigrants see is the State of Liberty (a woman) and even though ships are christened as females, women "are still being discriminated against." She opposes the fourth more directly. Whereas she had earlier argued that
"someone who is supposedly a leader of tomorrow" would not be unduly influenced by masculine pronouns, she now counters that these leaders need instruction on this matter.

Of interest here is that Diane and Carol managed to frame an opposition not to just any myside argument for their positions but to their own myside arguments. This approaches the self-interrogation that is essential to a critical epistemology.

**QUESTION 4b. Was the otherside argument empathic?** 21 of the 24 essays were judged empathic (Category D). Our concern was to distinguish otherside arguments that were presented unconvincingly (i.e., with myside bias) from those that had the feel, or conviction, of an argument that the writer might support.

A comparison of Bill's third paragraph to those by Kim, Diane, and Carol will illustrate the difference. Bill's myside argument runs through all four paragraphs of his essay. He never gets around to arguing against his position, not even in the otherside paragraph. Recall that Bill's introductory summary was actually a myside argument, and that it was further elaborated in paragraph two. In paragraph three he further shores up his myside argument (and avoids interrogating it) by dismissing the opposition as something bad, rather than trying to understand its logic and test it against his own. The third paragraphs in the other three essays could be read alone and, if the reader had not seen the surrounding paragraphs, mistaken for the authors' myside paragraph.
QUESTION 4C. Did the third paragraph contain a reasonably complex argument against the position the writer expressed in paragraph two? As in the myside argument, complexity was defined in terms of the number of lines of reasoning given, now counterarguments (Category E, Table 1). As a group, the writers generated fewer reasons against (32) than for (37) their position (though the difference was not significant in a correlated t-test). And, as in the myside argument, most (14 of the 22 with counterarguments) produced just one line of reasoning.

As in the myside argument, the generation of more than one line of reasoning was considered an advance in the otherside argument. This is because as lines are added the model under construction becomes more appropriate to the requirements of reasoning on multilogical problems. However, this more-is-better definition needs to be tempered by an appreciation for developing a line of reasoning in the direction of wholeness, empathy, and cogency rather than simply skimming across the surface of several.

One essay exemplified the latter (subject #7, Table 1). This writer argued in paragraph two that people's "natural curiosity" turns to dismay, then bitterness, and finally unrest when it is denied expression as free speech. Paragraph three then states,

Some could say that a society where every citizen has the power to oppose the government in public will threaten a country's loyalty, pride, nationalism, etc. Others might say that this system would end up in anarchy and would be like stepping back into cave man days. Still others might say that without government control of what may be spoken on that national security would be in constant danger.
The lack of development in these three counterarguments results in a less effective otherside argument that the better developed counterarguments in the essays of, for example, Karen, Diane, and Carol (Appendices A, C, and D).

Summarizing these three analyses of the third paragraph, it was first found that 22 of the 24 writers in our sample produced some sort of counterargument to the position they had voiced earlier. Second, counterarguments generally were not directly relevant to the supporting arguments; counterarguments generally countered the position taken in paragraph two but not the supporting reasons given for the position. Third, most writers were able to present this otherside reasoning without apparent myside bias, and, fourth, a single counterargument comprised most of the otherside arguments.

Would explicit scaffolding on paragraph three have elicited better otherside reasoning? This is difficult to say, particularly given cognitive theory that emphasizes the prerequisite capacity for reciprocity, or reversibility (Kohlberg, 1979; Piaget, 1965; Selman, 1971). Yet, the sample's responsiveness to what little scaffolding was present suggests to us that explicit scaffolding in this paragraph would be fruitful:

In paragraph three, you are to argue against each of the reasons you gave for your position in paragraph two. Be sure to think carefully about these counterarguments and present them convincingly, as one who believed them might.

QUESTION 5. Was dialectical reasoning present in the concluding paragraph? An incipient form was found in the fourth paragraph of 12 of the 24
essays. Admittedly, we were satisfied here with the simplest variants of dialectical reasoning. The conclusions in the essays attached are representative of the sample. Bill and Diane reproduced the essence of their myside argument; Karen and Carol did the same, but dialectically--they acknowledge the existence of counterarguments.

Bill's conclusion continues the myside argument he introduced in paragraph one and elaborated in paragraphs two and three. His conclusion states his position (free speech is needed) and a supporting reason—that without free speech "The U.S. would be another USSR or Denmark." Diane's conclusion is more sophisticated but still lacks a dialectical character. While avoiding the vulgarity of Bill's characterization of Denmark and offering instead a rendition of Jefferson's Declaration as a support for her position, still she does not display a modeling of the issue that includes at this point consideration of opposing points of view.

By contrast Karen's conclusion includes consideration of at least one of the two counterarguments she raised in paragraph three (the risk of chaos). Carol refers specifically to neither of her two counterarguments, but generally to both: "Although there are many strong arguments for the use of people and person in school books, I still believe that. . . ."

That roughly half of the sample evidenced dialectical reasoning in the concluding paragraph without any scaffolding (recall that the instructions for the fourth paragraph were vague: "In paragraph four, write a conclusion.") suggests that the phenomenon is not terribly rare and that explicit scaffolding would have elicited it from a greater proportion of the sample:
In paragraph four, write a tentative conclusion. Be sure that your conclusion shows that you have considered the arguments against your position as well as arguments that support your position.

CONCLUSION

The study has a number of limitations, chiefly the problems of artifactual, narrow, and ungeneralizable results. As for artifactuality, these findings were very likely confounded by students' writing and verbal ability. This is a limitation, however, only if one is interested in measuring dialectical reasoning independent of writing tasks, an interest this study did not share. The approach taken here, rather, was to assume the domain- and task-dependence of dialectical reasoning, a position in line with the emerging contextualism in cognitive psychology (e.g., Lerner, Hultsch, & Dixon, 1983), and to examine its character in a context relevant to social studies curriculum and instruction. Consequently, this was a study of dialectical reasoning in the particular setting of a scaffolded, four-paragraph essay written on one of two given civic issues. Future studies will need to explore its character in other contexts that are also relevant to school practice, for example, in other writing tasks, in community participation activities, and in discussions of current events and text material.

Second, the categories used cut both ways. While permitting systematic analysis, they restricted it. Dialectical reasoning can and should be defined operationally in ways other than this so that its texture might be explored and understood in terms that the present study ignored.
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Third, the findings of this study should not be generalized to other adolescents. Our sample was not randomly selected and is likely biased toward greater ability to write clearly and interest in problem solving on civic issues. For this reason, the study will conclude with hypotheses rather than generalizations. The intent is that they express in general terms what has been learned here, suggest future work, and contribute to the cumulative building up of theory on dialectical reasoning in social studies.

First, a summary of the findings, then three hypotheses. Civic issues are typically ill structured and multilogical. As such, they pose a unique set of epistemic demands on reasoners. Together, these demands might be characterized as a critical epistemology. Examined in this study was a critical attribute--dialectical reasoning.

Twenty-four high school students attending a leadership institute each wrote a scaffolded, four-paragraph essay on one of two civic issues. An analysis found:

1. Most (92%) students argued both for and against their position.
2. Most (54%) summarized what they knew about the issue without apparent interference from their myside argument. The others displayed some degree of confirmation bias.
3. Most (63%) argued for their position with just one line of reasoning.
4. Of the 22 students who managed to generate otherside reasoning, most (82%) produced a counterargument(s) that was a non sequitur to the myside argument.
5. Most (88%) wrote an empathic otherside paragraph.
6. Fifth-eight percent argued against their position using just one line of reasoning, and 33% used more than one. (Two students did not argue against their position.)
7. Most (54%) did not evidence even incipient dialectical reasoning in the concluding, unscaffolded paragraph.

Hypothesis #1. Dialectical reasoning is more available than one might suspect. This may strike the reader as counter intuitive, for experience tells us that dialectical reasoning is a rare phenomenon. One seems never to see it in public news conferences and addresses where apparently intelligent leaders expound sophisticated myside arguments without much restraint, nor does one see it much in secondary and college classrooms where the excitement of debate, often little more than alternating monologues, tends to overtake the more ambitious activity of model building. Yet it was elicited from 92% of our sample. And while not representative of American high school students, this sample does not appear to be terribly odd. Future research on this point might ask if dialectical reasoning can be elicited from a similar proportion of a more representative group of adolescents.

Hypothesis #2. The apparent rarity of dialectical reasoning among adolescents and adults is related more to metacognitive difficulty than to neurophysiological deficiency (Cf. Jensen, 1983) or cognitive underdevelopment (Cf. Kohlberg, Levine, & Hewer, 1984; Piaget, 1954). Metacognitive problems occur at the executive level of cognitive functioning where plans for problem solving are made and tactics marshaled (Flavell, 1979; Sternberg, 1985). The difficulties our writers had in the four paragraphs appear to us as problems of this sort since they occur precisely where explicit metacognitive guidance was lacking: In the first paragraph where
half the sample included myside arguments; in the second where most students argued for their position using just one line of reasoning; in the third where most counterarguments were non sequiturs and used only one line of reasoning; and in the fourth where half the sample reverted to simple myside reasoning.

Hypothesis #3. Appropriate metacognitive guidance (scaffolding) should help reasoners acquire the habits of dialectical reasoning. This statement is not made in ignorance of the necessity of cognitive readiness for the demanding task of framing a dialog "inside one's head" between arguments for and against one's position. Indeed, we subscribe to the assumption that egocentricity is the primary human condition and overcome only with time and much constructive activity. Yet, we suggest that maturity and cognitive readiness are not all that is necessary for dialectical reasoning -- that guidance helps one perform closer to the ceiling of one's abilities. This is Vygotsky's (1978) point. Intra-individual tactics originate in interindividual activity between guide and novice, and the guide's challenge in the tasks and domains of dialectical reasoning is to gear guidance to the present gap in a learner's skill, to aim the scaffolding at what Vygotsky has called the "zone of proximal development." This is "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers." (1978, p.86) Put another way, this zone is the gap between comprehension and production.
Such scaffolding might occur in writing exercises, like the one used here, as well as in oral classroom interaction. In discussions of controversial issues, students might be instructed to name the kind of comment they are about to make (e.g., a myside argument, an otherside argument, a new position), and to try articulating other students' logics that they can comprehend but with which they disagree. When leading discussions of material in texts, teachers might encourage students to imagine how another writer whose writing derives from a different logic might have explained the same events.

A number of difficulties accompany these hypotheses, and they lie on both the psychological and sociological sides of the coin (Parker, 1986a). On the psychological side, key questions remain unanswered: What is the relationship between the acquisition of dialectical tactics to one's disposition (Ennis, 1962), intelligence (Jensen, 1983; Sternberg, 1985), and ability to imagine, rather than evoke from memory, opposing lines of reasoning (Perkins, 1985b)? And, what is the relationship of role taking (Selman, 1971) and reversibility (Kohlberg, Levine, & Hewer, 1984) to the development of a critical epistemology?

On the sociological side, this scaffolding assumes a supportive environment. It assumes teachers and the school culture of which they are a part are concerned to foster in students a thoughtfulness beyond what is required for content mastery (Parker, 1985, 1986b, in press), and that they have explored student intellectual functioning sufficiently to identify with some accuracy students' zones of proximal development. Similarly,
such a project assumes that they are interested in the genuine exploration of civic life. Neither of these assumptions is without problems. Moreover, such a project assumes teachers and school leaders are capable of transcending their own penchant for vulgar or sophisticated myside reasoning, and that they have developed a reasoned approach to leading discussions of controversial issues (see Kelly's four approaches, 1986). Making matters on the sociological side yet more difficult, a critical epistemology rests on a parallax view of knowledge and truth that has little currency. It is a view that considers knowledge a social construction and truth the tentative outcome of ongoing argumentation to which no parties are denied access (Cf. Habermas, 1971). In brief, a project of this sort requires conducive conditions--a school and community life that allow and encourage it. Those conditions are not currently in place in sufficient measure to ease the difficulty of the project.
REFERENCES


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APPENDIX A: KAREN'S ESSAY
(subject #9)

#1 The freedom of speech is the U.S.'s first statement in the constitution. Any citizen of the U.S. may speak out his or her complaint, agreement, or ideas for the laws of their government.

#2 I am one hundred percent for the people's voice in government. Government is something that affects everyone with its laws for economics and military. So it is vital that everyone should be able to choose what they want and how to carry out those rules. It's true that there is a need for a ruler in every society, but not to use his or her power in a way that benefits only certain groups. There should be a ruler (government) to carry out what the majority of the people want. The people are and should be the ones to want a certain law and the government is the system to regulate that law.

#3 Very few people really know what's going on with the world and are not very well-educated enough to have a say in the government. The few who do know about what's needed and the solution should be the ones to make the laws of government.

People often do not agree on the answer to an issue one hundred percent. If people had a voice in how the government should do something, people would be always arguing and there would be chaos.

#4 The government does affect everyone, so even though the chaos of debate among the people, at least we the people can speak out on what we feel about an issue and make our government do what we, the people, want. When people have a say in government, the people feel in control, therefore you get a group of people that are satisfied and happy. If something affects someone, that someone should receive knowledge about it and be able to decide what he or she wants to do.
#1. To clear up some confusion in my mind, the United States of America allows citizens to protest against the government over an issue. I think that's excellent because I fear the day when American government will have to much power over the citizens, and that it will not be able to do anything except acquiesce to their needs. Thank God for America. The ability of a citizen to disagree with the government publicly does a lot of good to his community. It also reduces the power of the government and it also can bend the power of the government to benefit the protester and his/her community.

#2. Like I stated before, I am for the right of a citizen to disagree publicly with an issue or issues against the government. This will greatly reduce the power of a government and it will be great for the protester and its community. Throughout the history of America, a person(s) was/were able to protest publicly against an act or acts of Congress (taxes, tariffs, etc.). This greatly reduced the power of the government. These protests constantly pressure our government and, in a way, makes them do what we (citizens) want, not what they (government) think we want.

#3. I believe a person who would oppose the rights of a citizen(s) to voice their opinions in disagreement with the government would be someone like Gorbachev. He is a Communist leader. In his government if someone opposes the idea of a government that someone's head would be gone. The idea of Socialism also opposes the right of a citizen. The idea of Socialism is to make everybody equal. If a farmer makes 100 units and his two other competitors make 25 units each, that would make 50 units for all three farmers. In a country like Denmark where there is Socialism, they can't protest or say anything. Their government believes that government's authority (total authority) over citizens is necessary and that they are doing their best to please the community.

#4. Finally, I would like to say that the idea of openly expressing your own opinion against the government is needed. If this idea did not exist, U.S. would be another USSR or another Denmark.
APPENDIX C: DIANE'S ESSAY
(subject #13)

#1 The tenth amendment of the United States Constitution clearly states that citizens of the United States are endowed to certain rights, in which one of them is the right of free speech or the freedom of speech. Throughout history since the Bill of Rights were passed, citizens of the United States have taken advantage of this right in which sometimes disagreement on an issue would result in violence, prejudice, or battling debates. Some examples are the Women's Movement for the right of all women to vote, the Vietnam War that ultimately raised attacks from college campuses, and the Segregation issue where blacks fought for justice and equal rights. Thus, social and political changes were made. Women got the right to vote. Blacks were allowed in "White" schools and other areas in which they were previously not permitted in the so-called "White" society. The following pages will state some facts and opinions that will support or disagree with the above.

#2 To me, I personally agree in allowing the citizens of the United States the right to disagree with the government. It is the people who make and run the government. And so they have all the right in the world to do what they want with it as long as it will not harm, destroy, or cause havoc to other citizens or other nations of the world.

#3 The following are counterarguments in which I would make if I were the other side's reasoning on this issue.

I totally disagree with allowing the citizens of the United States to voice their opinions even if they disagree with the government. They made and run the government, so why should they disagree on what they have built for themselves. Such actions would result in violence and unending debates which would cause all kinds of havoc. Such as: 1) causing confusion to the rest of the citizens in the U.S. who may have no affect or part on their opinions; 2) create violence and war between each other resulting in no solution or affect on what their supporting for; and 3) the government cannot favor one side's argument and ignore the other side's. The two parties will have to work it out together. "United we stand, divided we fall."

#4 In conclusion, I believe in the right of free speech and the right for the citizens of the U.S. to disagree and voice out their opinions in the government. Thomas Jefferson stated that if the government was doing something wrong or not to the liking or rules of the people and the Constitution. Then it is the right of the citizens to change it or make another.
APPENDIX D: CAROL'S ESSAY
(subject #24)

#1 In this age and time, women have come to the idea that they should have more rights, and be as equal to men as possible. In most school books today, terms such as man or men have put the ERA on the bandwagon for more neutral terms such as person or people. They feel that this is promoting a "better" sex among males, them being the "dominant" specie. They feel everyone should be equal, and treated as such in our school books to promote equality among the sexes.

#2 Publishers of school books should avoid using words such as people and person, and continue using words such as man or men. I feel that both sexes are equal but with different characteristics, and should be treated as such. Also, if the words people and person were used there would be confusion as to who the person was. Did a person (male or female) make the first American flag? No! Betsy Ross, a woman did. Was our first President of the United States a person? No! He was George Washington. I also can't understand what the big gripe is that the ERA has. I mean, the Statue of Liberty is a woman, that is the first thing immigrants see when they enter this country. Ships are christened as es. So what do they have to complain about? Also, to change all the books would be expensive, and education already is having financial problems. If someone is supposedly a leader of tomorrow, then they would not be swayed by the use of the male gender in school books. They would (or should) know the issues and be able to form a logical opinion for or against this idea.

#3 Being a female, I can also see the other side of this controversial subject. Women have gotten very touchy and sensitive about their rights, and feel that they are still being discriminated against. So, in hopes of making the "young people" believe that women are equal to men in every way, they want to have neutral terms such as people and person substituted for man and men. And in this way they could secure that discrimination against women in all forms would cease. Look at the comparable worth issue. Women are still being paid lower wages doing the same job a man does, and he gets paid more. Is this fair? So seeing that we are the leaders of tomorrow, we should be taught equality now, in a feminist's view.

#4 Although there are many strong arguments for the use of people and person in school books, I still believe that the use of man and men should still be used in books. Women are being treated pretty fair these days, compared to days past, and I don't think that the Women's Libbers have anything to complain about. Also, the high cost factor of changing these books would be detrimental in trying to save education financially. It is better to have more and better trained teachers who can help us see both sides of issues without books rather than have poorly trained, small groups of teachers with books that promote neutrality and bland equality.
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* A = number of value claims in first paragraph; B = number of reasons in myside paragraph; C = relevant counterargument; D = empathic counterargument; E = number of reasons in counterargument; F = dialectical conclusion.