OPPOSITION IN THE DISCOURSE OF ARGUMENT

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1. INTRODUCTION

The subject of this paper[1] is that speech activity known as argument, and by extension, argument in any context. To establish what argument is, and to understand it, we need to look at distinctions which have a greater dimension than formal context alone. Section 1 revises and expands our approach (see Shahin 1990) to accommodate the vagaries of real-time argumentative discourse. Sections 2 and 3 develop a method of analysis of argumentative discourse. The last section summarizes the advantages of this method and suggests how complementary analytic notions may be applied to the field of discourse analysis and argumentation.

O'Keefe's (1977, 1982) distinction between argument₁ and argument₂ has been instrumental in clarifying 'argument' and argumentation. Argument₁ is argument that is made, a 'linguistically-explicable claim plus one or more linguistically-explicable reasons'. 'Linguistically-explicable' does not mean linguistically explicit. Rather, argument₁ may be explicit or implicit, but one should "be able to say what the argument₁ was, to express linguistically both the claim and overtly expressed reasons" (O'Keefe 1982, p.13, italics in the original). So a clear example or paradigm case of argument₁ would be something like the following:

I don't want to go with you because I'm tired. I was up all night.

A borderline case, with its implicit claim and explicit reasons, would instead be something like the second utterance in the following exchange.

- 1. Speaker 1: Do you want to come with me?
- 2. Speaker 2: I'm tired. I was up all night.

O'Keefe's description of argument₁ seems correct, except that we question limiting discourse constraints to just overtly expressed reasons. 'Overtly-expressed' means 'present in the discourse'. Covert reasons like speaker's mood and the history of previous interactions between conversational partners, as well as covert 'reasonings' (unexpressed thoughts), may not show up as discourse and thus are not overtly expressed. Yet, we contend that not even argument₁ should be divorced from its discourse context. Such covert reasons and reasonings are present in a given discourse as 'non-discoursive elements' (Willard 1979), or forces which definitely may influence the verbal interaction. They should, then, qualify at least as implicit reasons for argument₁. And in fact, if the discourse data is extensive enough, reflecting a realistic interactional time-span, the covert reasons of one argument₁ might easily show up as an overt discourse element. By dropping the requirement that argument₁ reasons must be overtly-expressed, 'linguistically explicable' could simply mean that one should be able to express linguistically both the claim and the reasons.

Argument₂, on the other hand, is argument that is *had*. It is 'disputatious interaction' (O'Keefe and Benoit 1982), an 'overt extended disagreement' involving two or more persons. O'Keefe has noted that when two or more people have an argument₂, they may or may not produce arguments₁. However, we have found that arguments₁ are always present in arguments₂. These arguments₁ may be explicit or implicit, but they will always be linguistically-explicable. O'Keefe does not offer a paradigm case of argument₂, but a paradigm case (see Shahin, 1989) might be something like the following.[2]

Mrs. Boyle: You're very young.

Mollie: Young?

Mrs. Boyle: To be running an establishment of this kind. You can't have had

much experience.

In this exchange, Mrs. Boyle produces an explicit argument₁ (Because you are very young to be running an establishment of this kind, you can't have had much experience), and an implicit argument₁ which can be linguistically-explicated (Because you are very young and can't have had much experience, you should not be running an establishment of this kind).

Argument₂ is a speech activity, a discoursive process comprised of a particular type of speech act. The only candidate so far for this act is O'Keefe's 'making an argument', for it is the act associated with argument₁, as the 'communicative vehicle' by which argument₁ is conveyed. Yet, it seems that if one person performs the act of argument-making when producing argument₁, then each of the two or more persons having an argument₂ will perform this act as well, as they make their own arguments₁ in their individual turns-at-talk. For this reason we take another, more generic act as the basic act in argument₂ in the next section. By viewing argument₂ in terms of this other act, we can start to explain the structure and process of argument₂.

The method of analysis we develop in this paper is not restricted by features of discourse setting. It is important to dispel possible confusion arising from identifying argument₂ in a formal setting with the 'made' argument of argument₁. O'Keefe's distinction makes it clear that argument₁ and argument₂ are equally prototypical, and the process of argument₂ will always have as its product argument₁. O'Keefe himself does not like this process/product distinction because he feels argument₁ has its own processual features. If this is true, argument₁ has its own processual features, and these features will be different from the processual features of argument₂ as a discourse process.

Schiffrin (1985), for example, distinguishes between Rhetorical and Oppositional argument. Rhetorical argument involves one speaker presenting an 'intact monologue supporting a disputable position'. Oppositional argument occurs when 'two or more speakers openly support disputable positions'. Oppositional and Rhetorical argument are not mutually exclusive, for even in Rhetorical argument within formal settings, Oppositional argument (in the form of anticipated arguments₂) is present. Likewise, Oppositional argument may see speakers digressing into Rhetorical argument, depending partly on the length of turn a speaker is able to secure. Schiffrin's inclusion of 'support' and 'position' in her definitions of Rhetorical and Oppositional argument echoes the claim-plus-reasons of argument₁. This also agrees with our finding that argument₁ is always present in argument₂, and in section 3, it will be seen that arguments₁ are present in argument₂ on three distinct levels of the discourse.

To summarize, for O'Keefe arguments₁ are 'abstract objects', consisting of a linguistically-explicable claim plus one or more linguistically-explicable reasons. Opposi-

tional argument involves two or more persons in the speech activity of argument₂, in which they produce arguments₁. What this argumentation scheme is lacking, however, is a place for the speech activity of Rhetorical argument. O'Keefe appears to include Rhetorical argument with argument₂, since he actually defines argument₂ as 'ordinarily' involving two or more speakers. But Oppositional and Rhetorical argument are clearly distinct speech activities. We would propose a three-way distinction between **argument₁**, **argument₂** and **argument₃** (argument that is **given**).

Argument₂ and argument₃ are discourse processes and are engaged in by two or more speakers (argument₂) or even by one speaker (argument₃). Argument₂ may even incorporate argument₃. The speech act which is performed in argument₂ (as well as argument₃) permits the process by which argument₁ is produced. The nature of the speech act that forms the basis of argument₂, and its structure in terms of this act, is the subject of the next section.

2. THE STRUCTURE OF ARGUMENT2

O'Keefe and Benoit (1982, p. 155) describe arguments₂ as distinctive and coherent events, in that "it is easy to see in most cases just where an argument started and when it ended. And the particular actions which occur within an argument all appear to occur relevantly, given that we know an argument is occurring." Their description raises the three issues of initiation, resolution, and internal structure for argument₂. In this section, we explore these factors, for displaying the internal cohesion of argument₂ also allows us to show how an argument₂ begins and ends.

The Mrs. Boyle example in section 1 was glossed as a paradigm case of argument₂, but is it a paradigm case? A paradigm case would be a clear example and should elicit agreement that it is indeed a case of argument₂ (O'Keefe 1982). O'Keefe and Benoit reject the paradigm case approach on the grounds that argument₂ is an inherently 'fuzzy' concept. This fuzziness is "due, in part, to the diversity of behaviours employed in argumentative episodes" (p.162). Instead, they suggest a 'generic characteristic' approach, which involves 'identifying features' to provide a characterization of argument₂. We suggest that a list of generic features, derived from argument₂ data, are based on clear examples of argument₂, and the 'generic characteristic' approach is simply a method of arriving at a 'paradigm case' for argument₂. We also feel that to describe argument₂ as 'fuzzy' contradicts even the notion of a 'generic characteristic' approach. Thus, we employ the generic characteristic approach to exemplify and explicate the basic structure of argument₂, and by so doing, offer a substantiated paradigm case for argument₂.

O'Keefe and Benoit identify one generic feature of argument₂ as the 'relationship of opposition between participants'. That is, "interactants. . .align themselves in mutually inconsistent ways" toward some goal(s), act(s) or belief(s)" (p. 162-63).[3] In simplest terms, when speakers argue, they disagree, and this relationship of opposition between participants is a fundamental characteristic of argument₂.

The feature opposition operates on three distinct discourse levels in argument₂. The first is the Interactional Level (IL). On the IL, argument₂ participants define their relation—ship as oppositional. IL opposition is a contextual feature, since it refers to interpersonal relationship, but it is also a discourse feature, since it is a relationship between turns-at-talk. The second level is the Topic Level (TL), for interactants align themselves in differing ways toward some goal(s), act(s) or belief(s). The third level is the Sentence Level (SL), where base propositions are defined as oppositional to each other. These IL, TL, and

SL distinctions reflect the fact that argument₂ involves opposition not only between speakers, but also between their utterances over what is spoken, over what is spoken about, and over what is said about what is spoken about.

The discourse display of opposition is a Formulation/Decision (F/D) speech act pair. Fs have been used in previous studies (Garfinkel and Sacks, 1970; Heritage and Watson, 1979; Bilmes, 1981) to refer to summaries of conversational topic, but some (Bilmes, 1985) suggest that this is too restrictive, since there are countless ideas that speakers can formulate in words. Following this lead, we define a F as a a speaker's personal composition, or representation, of a 'fact', and we take the speech act of Formulation (F) as the basic act in argument₂. As an example, consider the following conversational contribution.

Youth Pastor: The nuclear war has misdirected the youth.

By this F, the Youth Pastor has formulated in words the effect of 'the nuclear war' on the youth, thus representing this 'fact' and entering it into the discourse. A representation of a 'fact' is thus produced whenever a speaker puts something into words, and is realized as an F whenever a speaker puts it into the discourse. The 'fact' is a fact, however, only insofar as the speaker sees it to be one. In the example above, the Youth Pastor has formulated his evaluation of the effect of the nuclear war on the youth. Because Fs are subjective, the 'fact' represented may or may not be a 'fact' for the hearer of the F. This subjectivity means that argument₂ is an ever-present possibility in discourse.

But not all Fs are equal; some are more implicit, at a higher level of abstraction in the discourse. This problem can be solved by identifying Fs on three discourse levels in argument₂: Fs may be IL, TL or SL Fs. All three types of Fs can be a speaker's personal composition, or representation, of a 'fact'. In this section, most examples of Fs are SLFs (examples of ILFs and TLFs are given in section 3).

Our data is a transcript of argument₂ produced in a laboratory setting by four subjects, wherein each person speaks as a character personally chosen for the sake of the experiment.[4] The characters are Youth Pastor (YP), Musician (MUS), Doctor (DR) and Computer Scientist (CS). The speakers were directed to argue as pairs against an opposing pair, attempting to influence which pair should be allowed to use 'the bomb shelter' in the event of a nuclear war. 'Government officials' would view a videotape of their discussion and from it decide which pair should be allowed to use the bomb shelter. Discussion was allowed to continue for approximately four minutes. The experiment supervisor then entered the room, assigned a new speaker pairing, and directed the speakers to resume discussion. This was done twice, yielding three separate sets of arguments₂.

A SLF is an argument-making act, producing an explicit claim (EC). For example, The F in the Youth Pastor's contribution produces the EC The nuclear war has misdirected the youth. The ECs of two Fs together may produce an explicit argument $_1$ (EA $_1$), as in the following.

Musician: I worry about leaders who say 'my faith' and 'my view' because I think that's why we are where we are.

The example above consists of the two SLFs seen in (1) and (2).

- 1. SLF: I worry about leaders who say 'my faith' and 'my view'.
- 2. SLF: I think that's why we are where we are.

A SLF can also produce an implicit claim (IC) or an implicit argument $_1$ (IA $_1$). The Musician's contribution produces the IC There is something wrong with leaders who say 'my faith' and 'my view'. It can also produce the IA $_1$ Because there is something wrong with leaders who say 'my faith' and 'my view', we don't want such leaders.

Garfinkel and Sacks (1970) claimed Fs as valid 'formal structures' of discourse, setting out the following criteria for Fs as speech activities.

activities (a) in that they exhibit upon analysis the properties of uniformity, reproducibility, repetitiveness, standardization, typicality, and so on; (b) in that these properties are independent of particular production cohorts; (c) in that particular-cohort independence is a phenomenon for members' recognition; and (d) in that the phenomena (a), (b), and (c) are every particular cohort's practical, situated accomplishment (p. 346).

This list can be clarified and adapted to Fs as follows:

Formulations are valid formal structures of discourse because they are acts

- (a) which have uniform and typical features
- (b) which occur throughout discourse
- (c) which may be reproduced by speakers
- (d) whose properties (listed in (a), (b) and (c)) are properties of the discourse proper (not of the speakers-as-part-of-discourse-context)
- (e) which speakers recognize as part of the discourse proper
- (f) which have local, practical function in discourse

Fs are formal structures of discourse because they are acts which uniformly and typically occur whenever a speaker puts something into words. They are a speaker's personal composition, or representation, of a 'fact', and are performed on the IL, TL and SL of discourse. Fs on each of these levels are argument-making acts; the arguments₁ may be explicit or implicit, but they will always be linguistically-explicable. Speakers and hearers readily recognize Fs as discourse elements, since they can isolate and comment on them. This occurs, for example, when a speaker says something like "In other words, what you mean is" Re-Formulations are new Fs and may be quite different from an original F.

Fs have a practical function in argument₂, and play a key role as the first act in a Formulation/Decision (F/D) speech act pair. Heritage and Watson (1979) note "that formulations occasion receptions ... but also that the character of their receptions is sharply constrained to confirmations or disconfirmations, or, more generally, decisions" (p.141). Examples of the F/D+ pair can be seen in the pairing below.

- 1. F by Comp. Scientist: Well, I think the problem that's been in the past, the people who've been in control of the technology haven't been the people creating the technology.
- 2. D+ by Musician: Right!

A D- is often performed by conversational implicature, as in the pairing below. By itself, the supplication God save us from a good Christian religion is a paradoxic F producing the IC A good Christian religion should be avoided. By illocutionary force, it also

produces the IC We don't want a good Christian religion, as well as the IA₁ Because we don't want a good Christian religion, we don't need you, Youth Pastor. This use of conversational implicature to achieve illocutionary force is pervasive in argument₂.

- 1. F by Youth Pastor: You need the life of botany and zoology and the love of a good Christian religion, and direction for the people, and -
- 2. D- by Comp. Scientist: God save us from a good Christian religion.

Every Decision (D) is itself a F, with all the features of a F. As a D, it also stands in a binary relation to a previous F. A D+ is a con-Formulation, and a D- is a counter-Formulation to a previous F. The F/D- pair is the basic discourse display of the generic feature opposition in argument₂. In non-argumentative discourse, the F/D- pair does not occur. In fact, Ds themselves may not occur, for the co-locutor may utter a F which is not in relation to an initial F. When this occurs, the new speaker has made a topic shift. The existence of F/F pairs means that, in non-argumentative discourse, the conditional relevance between a F and D may be relaxed. But in argument₂, conditional relevance is strict. Decisions are always present, at least initially; they are also constrained, at least initially, to disconfirmations.

The fact that every D is itself a F provides for the on-going process of argument₂. As a F, every D itself requires a D. This means that the full basic structure of an argument₂ is a F/D-/D-... sequence. An example of this can be seen in the following ordering: the first two utterances in the example are only an argumentative exchange, A F/D-pair; this becomes an argument₂ with the initiation of uptake.

F by Comp. Scientist: A lot of wars were created by a [good Christian religion] -

D- by Youth Pastor: But science and the computers have led us into the technology of creating nuclear wars.

D- by Comp. Scientist: Well, I think the problem that's been in the past, the people who've been in control of the technology haven't been the people creating the technology.

The F/D-/D- sequence is the minimal argument₂. This contrasts with O'Keefe's presentation of the F/D- pair as a 'minimal argument₂', though even for O'Keefe this is not a 'paradigm case' of argument₂. In this study, a minimal argument₂ and a 'paradigm case' of argument₂ are the same thing. A simple distinction between *initiation of uptake* and *uptake* of argument₂ illustrates why it is not the F/D- pair, but the F/D-/D- sequence that is the minimal argument₂.

The following exchange is only an argumentative exchange, a F/D- pair. It could have become an argument₂, but for that the initiation of uptake by the Youth Pastor needs uptake. Uptake occurs when there is disagreement to disagreement. Another glance at the example shows that uptake to this F/D- pair occurs, since the Computer Scientist's next utterance is a D-. When uptake occurs, an argument₂ has been realized.

- 1. F by Comp. Scientist: A lot of wars were created by a [good Christian religion] -
- 2. D- by Youth Pastor: But science and computers have led us into the technology of creating nuclear wars.

3. D- by Comp. Scientist: Well, I think the problem that's been in the past, the people who've been in control of the technology haven't been the people creating the technology.

The F/D-/D- sequence as the minimal argument₂ matches interactional analysis research (Millar, Rogers and Bavelas, 1984), which defines interpersonal conflict as 'three consecutive one-up moves'. The F/D-/D- acts correspond to this 'transaction', and stand in a symmetrical relationship to each other (see Watzlawick, Bavelas and Jackson 1969).

3. THE PROCESS OF ARGUMENT₂

In this section, we illustrate the internal structure of argument₂ in both the nature of Fs within a turn-at-talk and the relationship between Fs as F/D pairs. Our analysis of the first argument₂ of our data is driven by the following three goals.

- (1) to distinguish a speaker's overall (IL) F from its sub-Formulations (TLFs and SLFs)
- (2) to explain the relationship between all Fs in a single turn
- (3) to explain the relationship between all Fs in the argument2

The first discourse turn of our data, an F by the Youth Pastor can be thus analysed as:

- 1. F_1 : So, I guess
 - a. (f₁) the argument's what's gonna happen with life after a nuclear war and twelve months of living in the bomb shelter.
 - b. And (f₂) there's gotta be hope afterwards.
- 2. F₂: And I propose that
 - a. (f₃) with leadership and a very sense of loyalty to the youth -
 - b. and (f_A) the nuclear war has mis-directed the youth.
 - c. (f₅) After we get out, with my leadership, I think direct the youth into a new and better life
 - d. (f₆) instead of nuclear war again
 - e. and (f₇) living in a world of peace and love
 - f. (fg) which my faith believes in
 - g. And (fg) we can avoid such a nuclear holocaust again.

Simply by speaking, the Youth Pastor has performed an ILF F, formulating in words what he had to say for his turn at talk. The 'fact' represented by an ILF is the gist of what a speaker has to say. For example, the gist of this F is that he should be allowed to go into the bomb shelter. An ILF produces an IC, implicit because it is expressed through an entire turn, not a base proposition. This F produces the IC I should be allowed to go

into the bomb shelter. An ILF may also produce an IA_1 , in this case the IA_1 Because I have provided the solution to the problem, I should be allowed to go into the bomb shelter.

Non-initial IL Ds produce a definition of interpersonal relationship. An ILD defines the relationship between its speaker and a previous speaker as solidary when it is a D+, but as oppositional when it is a D-. In this case, the IL D (as a F) is more of a personal representation than a personal composition of the 'fact' of interpersonal relationship, since the 'fact' is not necessarily composed in words within the ILD.

A TLF is a speaker's personal composition, or representation, of a topic of discourse. The Youth Pastor's ILF consists of two TLFs, F_1 and F_2 . F_1 is his evaluation of the problem of the discourse at hand. F_2 is his evaluation of the solution to this problem. A TLF produces an IC: F_1 produces the IC The problem at hand is that life after a nuclear war is uncertain; F_2 produces the IC The solution to this problem is my religious leadership and loyalty to the youth.

A TLF can also produce a IA1: F_2 produces the IA1 Because the solution to this problem is my religious leadership and loyalty to the youth, I should be allowed into the bomb shelter. Together, two TLFs can produce an IA1, and thus F_1 and F_2 produce the IA1 Because the problem at hand is that life after a nuclear war is uncertain, I propose that the solution to this problem is my religious leadership and loyalty to the youth.

The 2 TLFs by the Youth Pastor each consist of specific sub-Formulations. These are his SLFs, previously numbered as f_{1-9} . Recall that a SLF is a speaker's personal composition, or representation of a 'fact'. Each SLF produces an EC, and may also produce an IC and an IA₁. And two or more SLFs together may produce an EA₁, an IA₁ or a partially explicit, partially implicit argument₁ (E/IA₁). Obscured by syntactic structure, linguistic explication of an EC is someimes required. For example, the EC of the subordinate clause (f₇) living in a world of peace and love is explicated as After we get out, with my leadership I think I can direct the youth into living in a world of peace and love. The complex E/IA₁ produced by the YP's f_{3-9} (with implicit elements starred) is:

- 1. *because (f₃) *loyalty and a sense of leadership to the youth are important
- 2. (f_4) *because the youth need something
 - *because the nuclear war has misdirected the youth.
- 3. *and because (f_5) after we get out, with my leadership | think | can direct the youth into a new and better life
- 4. *and because (f₆) after we get out, with my leadership I think I can direct the youth not into a nuclear war again
- 5. *and because (f₇) after we get out, with my leadership I think I can direct the world into living in a world of peace and love
 - *because my faith believes in living in a world of peace and love
- 6. *therefore (fg) we can avoid such a nuclear holocaust again

It is the linguistic explication of this argument₁ which makes sense of f_{3-9} , and of their specific ordering within the F_2 .

Fs need not be analysed for their every possible argument₁ product. Only those products need be analysed which are instrumental in the process of an argument₂, i.e., responded to by a hearer-as-subsequent-speaker. Doing this lessens the subjectivity of the analyst and focusses on the process of the argument₂. For the discourse participants, an F is a subjective entity in that (1) it is a speaker's personal composition, or representation, of a 'fact' (or more than one 'fact', if the F produces more than one claim) (2) it is subject to a hearer's personal perception of what 'facts' are represented and to the hearer's personal evaluation of those 'facts'.

The Youth Pastor's turn can be thus represented by two formulaic sequences. The first sequence shows the exclusively implicit, higher level contents of the turn, by showing the relationship between the TLFs within the ILF. The second sequence shows the sentence level contents of each TLF, and the relationship between SLFs within the TLF.

(1)
$$\{(F_1)F_2\}$$

F

(2) $\{[f_1f_2][(f_3(f_4),f_5f_6,f_7(f_8))f_9]\}$

F1

F2

F

An analysis of the formal components of the first argument₂ of our data is given in Table 1. Table 2 then presents the formulaic sequences for each of the discourse turns in this argument₂ on the each of its levels, that is, the Interactional, Topic, and Sentence Levels. These formulaic summarizations capture the simultaneous function of all Fs as members of both the discourse turn and the argument₂.

Table 1. Data Analysis for the Pairs

- 1. F by Youth Pastor:
 - a. F₁. So, I guess
 - (f₁) the argument's what's gonna happen with life after a nuclear war and twelve months of living in the bomb shelter.
 - ii. (f₂) And there's gotta be hope afterwards.
 - b. F₂: And I propose that
 - i. (f3) with leadership and a very sense of loyalty to the youth -
 - ii. and (f₄) the nuclear war has misdirected the youth.

- iii. (f₅) After we get out, with my leadership I think can direct the youth into a new and better life
- iv. (f₆) instead of nuclear war again
- v. and (f₇) living in a world of peace and love
- vi. (fg) which my faith believes in.
- vii. And (fg) we can avoid such a nuclear holocaust again.

2. D- by Musician:

- a. D-1: Well, I guess my opinion would be that
 - i. (d-1) I worry about leaders who say 'my faith' and 'my view'
 - ii. because (f₂) I think that's why we are where we are.
- b. D-2: And it seems to me that
 - (f₃) medicine and music and philosophy are those things which provide people with a means of looking at the world and assessing it and creating a better world
 - ii. (d-4) without the kind of conviction of a leader who thinks that he or she is right.
 - iii. and that (d-5) science and religion have failed us in terms of this modern world.
 - iv. and that (f₆₎ medicine and music are non-judgmental.
 - v. (f₇) They're things that are for all people.
 - vi. (fg) They're entirely focussed on the beneficial aspects of human behaviour.
 - vii. (fg) And what we're going to need in this new world are people who are in the helping professions, people who are giving, who are creating, who are helping people to think and to experience a better form of life.
- c. D-3: So I think that
 - i. $(d-_{10})$ Bob and I should definitely be the two people who go into this shelter.
- 3. **D** by Comp. Scientist:
 - a. D-1: No, I might agree that

- i. (d+1) you need some people who are in the helping professions but
- ii. (d-2) you also need some people who are involved in the more hard sciences
- iii. because (f₃) if you have a whole bunch of people involved in the helping professions and only one person who's in the hard sciences, you may end up with a situation where you end up in the same nuclear war that we're in now
- iv. because (f₄) you don't have enough people monitoring the situation or understanding the situation well enough to prevent it from happening again.

b. D-2: And I think

- i. (f₅) I will be able to, as a scientist, I will be able to help my associate in talking with the youth and explaining how we can prevent it from happening again.
- ii. (d-6) From my background and his background I think we would be an excellent team to discuss with the youth about how to prevent this from happening again.

4. D- by Doctor:

- a. D-1: I think that
 - i. (d+1) there's some advantages to being a scientist that works almost exclusively with computers
 - ii. but (f₂) in getting my doctoral in Public Administration I had to aquire a lot of knowledge about computers.
 - iii. I think that (d-3) as far as computer programming and utilization of computers, I would do quite an adequate job.
- b. D-2:
 - i. (f_{Δ}) I've also had a lot of experience working with people.
 - ii. (d+5) The people that I'm working with aren't young people.
 - iii. (f₆) They're primarily people on the medical staff at the hospital.
 - iv. But I think that (d-7) the skills that I've acquired would certainly put me in a position to deal with young people as well.
- c. D-3: And I think that
 - i. where (fg) my strengths are in the sciences

- ii. (d-g) we need somebody that's a well-recognized individual to help promote the culture that we've developed.
- iii. (f₁₀) We don't want to lose the culture.
- iv. (f₁₁) If individuals lose their culture, they're going to feel a much greater loss than they would by just having lost friends and relatives.

d. D-4: So I think that

i. (d-12) it's important that we maintain the level of knowledge that we have now in botany and zoology and Administration, and that we continue with the arts.

Table 2. Formulaic Summary of Turns

- 1. Youth Pastor
 - a. Interactional Level:

F by Youth Pastor

b. Topic Level:

$$\{(F_1)F_2\}$$

c. Sentence Level:

$$\{[f_1f_2][(f_3(f_4),f_5f_6,f_7(f_8))f_9]\}$$

- 2. Musician
 - a. Interactional Level:

D- by Musician:

b. Topic Level

$$\{(D_{-1} D_{-2})D_{-3}\}$$

c. Sentence Level:

$$\{[d_{1}(f_{2})][f_{3}(d_{4}),d_{5}f_{6}f_{7}f_{8}f_{9}][d_{10}]\}$$

- 3. Computer Scientist
 - a. Interactional Level:

D- by Computer Scientist

b. Topic Level:

$$\{(D-1)D-2\}$$

c. Sentence Level:

$${[d+_1 d-_2(f_3(f_4))][(f_5)d-_6]}$$

- 4. Doctor
 - a. Interactional Level:

D- by Doctor:

b. Topic Level:

$$\{(D_{-1} D_{-2} D_{-3})D_{-4}\}$$

c. Sentence Level:

$$[[d+1,(f_2)d-3][(f_4,d+5,(f_6))d-7][(f_8)d-9(f_{10}(f_{11}))][d-12]]$$

The minimal TL F/D-/D- sequence is realized as F F/D- D- D-/D- D-/D- D- D- D-. Argument₂, of course, will allow several TLFs per discourse turn, but the function of these Fs (realized as Fs or Ds) and the response-type of Ds (as + or -) is consistent per turn. We represent the TL F/D-/D- sequence of this argument₂ (with m > 0) as: $F_m/D-_m/D-m$

In turn, the minimal SL F/D-/D- sequence by the four participants is actually realized as:

- 1. ffffffff
- 2. d-ffd-d-d-fffd-
- d+ d- f f f d-
- 4. d+ f d- f d+ f d- f d+ f f d-

This does not at first seem to be a coherent F/D-/D- sequence, but if we link the SLFs as members of particular TLFs, with claims or reasons in particular arguments₁, the SL F/D-/D- sequence becomes appparent. That is, in the SL F/D-/D- sequence of argument₂,

- 1. one SLF per TLF is mandatory, though more than one may occur
- 2. a SLF serving as simple claim in a TL D-, in subsequent turns like D-2 and D-3, is mandatory, but more than one may occur
- 3. one or more SL F or D+ may also serve as simple claim in a TL D- in D- $_2$ and D- $_3$

SLFs serving as reasons in an argument₁ in a TLF of D-2 and D-3 may occur as F, D- or D+ and may be several in number. The SL F/D-/D- sequence of argument₂ (with m > 0) may be represented as:

$$(F_m)_m / (D_m (D_m F_m) (D_m D_m) (D_m F_m D_m))_m / (D_m (D_m F_m) (D_m D_m) (D_m F_m D_m))_m$$

The F/D-/D- sequence, then, occurs on all three levels of argument₂ discourse. The full sequence of argument₂, with m > 0, can be represented as the following F/D-/D- sequence which secures uptake of argument₂

$$\begin{aligned} & \text{FF}_{m}(f_{m})_{m}/D - D -_{m}(d -_{m} & (d -_{m}f_{m}) & (d -_{m}d +_{m}) & (d -_{m}f_{m}d +_{m}))_{m}/\\ & D - D -_{m}(d -_{m} & (d -_{m}f_{m}) & (d -_{m}d +_{m}) & (d -_{m}f_{m}d +_{m}))_{m} \end{aligned}$$

The full F/D-/D- sequence of argument₂ ensures the presence of the generic feature 'opposition' on all levels of the discourse, and across all turns at talk. This feature is displayed in a D- of any level, which implies a F/D- pair. The presence of opposition makes argument₂ a coherent event. While ensuring this coherence, the full F/D-/D- sequence of argument₂ permits TL and SL Fs in second or subsequent turns at talk to function as Fs. This allows speakers to engage in argument₃, supporting their positions by Fs which are not in relationship to any previous F in the discourse. SLFs in second or subsequent turns at talk may also function a D+ resulting in 'prefaced disagreement' (Pomerantz, 1975).[6]

The argument₁ products of each Formulation, which are instrumental in the argument₂, are linguistically explicated in Table 3. The implicit elements are starred, following the sequence of their inferred contribution to the argument. Finally, it is thus possible to achieve a complete analysis, by showing not just the *product* of the argument₂, but its *process* on all three levels, the Interactional Level, the Topic Level, and the Sentence Level. This is what Table 4 attempts to display in formulaic terms, indicating not just the formal, explicit elements, but also the implicit and inferred elements which constitute the essence of the real argument.

Table 3. F Argument₁ Products

- 1. **F**₁ by YP:
 - a. *IC: The YP should be allowed into the bomb shelter.
 - b. *IA1: Because the YP should be allowed into the bomb shelter, the CS should also be allowed, and the MUS and DR should not be allowed into the bomb shelter.
- 2. **D**-2 by MUS:
 - a. *IC: The MUS and DR should be allowed into the bomb shelter.
 - b. *IA1: Because the MUS and DR should be allowed into the bomb shelter, the YP and CS should not be allowed into the bomb shelter.
- 3. D-3 by CS):
 - a. *IC: The YP and CS should be allowed into the bomb shelter.
 - b. *IA1: Because the YP and CS should be allowed into the bomb shelter, the MUS and DR should not be allowed into the bomb shelter.
- 4. **D**−₄ by DR:
 - a. *IC: The MUS and DR should be allowed into the bomb shelter.
 - b. *IA1: Because the MUS and DR should be allowed into the bomb shelter, the YP and CS should not be allowed into the bomb shelter.
- 5. F₁ by YP:
 - a. *IC: The problem at hand is that life after a nuclear war is uncertain.
- 6. F₂ by YP:
 - a. *IC: The solution for the new world is my (YP's) religious leadership and loyalty to the youth.
 - b. *IA1: Because the solution for the new world is my (YP's) religious leadership and loyalty to the youth, I (YP) should be allowed into the bomb shelter.
- 7. D-3 by MUS:
 - a. *IC: The YP's religious leadership and loyalty to the youth are not the solution for the new world.
 - b. *IA1: Because the YP's religious leadership and loyalty to the youth are not the solution for the new world, the YP should not be allowed into the bomb shelter.
- 8. D-₄ by MUS:

- a. *IC: Medicine and music are the solution for the new world.
- b. *IC: Medicine and music are the only solution for the new world.
- c. *IA1: Because medicine and music are the only solution for the new world, the YP's religious leadership and loyalty to the youth are not the solution for the new world.

9. D-5 by MUS:

- a. *IC: The MUS and DR should be allowed into the bomb shelter.
- b. *IA1: Because the MUS and DR should be allowed into the bomb shelter, the YP and CS should not be allowed into the bomb shelter.

10. D-6 by CS:

- a. *IC: The hard sciences are part of the solution for the new world.
- b. *IA1: Because the hard sciences are part of the solution for the new world, medicine and music cannot be the only solution for the new world.

11. D-7 by CS:

- a. *IC: The YP and CS should be allowed into the bomb shelter.
- b. *IA1: Because the YP and CS should be allowed into the bomb shelter, the MUS and DR should not be allowed into the bomb shelter.

12. D-8 by DR:

- a. *IC: The CS is not needed in the new world.
- b. *IA1: Because the CS is not needed in the new world, the CS should not be allowed into the bomb shelter.

13. D-g by DR:

- a. *IC: The YP is not needed in the new world.
- b. *IA1: Because the YP is not needed in the new world, the YP should not be allowed into the bomb shelter.

14. D_{-10} by DR:

- a. *IC: The MUS is needed in the new world.
- b. *IA1: Because the MUS is needed in the new world, the MUS should be allowed into the bomb shelter.

15. D-₁₁ by DR:

a. *IC: The MUS and DR are needed in the new world.

b. *IA1: Because the MUS and DR are needed in the new world, the MUS and DR should be allowed into the bomb shelter.

16. f₁ by YP:

a. EC: The argument's what's gonna happen with life after a nuclear war and twelve months of living in the bomb shelter.

17. f₂ by YP:

a. EC: There's got to be hope afterwards.

.18. f₃ by YP:

- a. *IC: Leadership and loyalty to the youth are important.
- b. *IC: The youth are important.

19. f₄ by YP:

a. *IC: The youth are important.

20. f₅ by YP:

- a. *IC: My (YP's) leadership is important.
- b. *IC: The youth are important.

21. f₆ by YP:

- a. *IC:My (YP's) leadership is important.
- b. *IC: The youth are important.

22. f₇ by YP:

- a. *IC: My (YP's) leadership is important.
- b. *IC: The youth are important.

23. fg by YP:

- a. *IC: Religious faith is morally good.
- b. *IA₁: Because religious faith is morally good, my (YP's) religious leadership is desirable for the new world.

24. fg by YP:

a. *IC: With my (YP's) religious leadership and loyalty to the youth we can avoid another nuclear war.

b. *IA1: Because with my (YP's) religious leadership and loyalty to the youth we can avoid another nuclear war, I (YP) should be allowed into the bomb shelter.

25. d-₁₀ by MUS:

- a. *IC: There is something wrong with religious leaders.
- b. *IA1: Because there is something wrong with religious leaders, the YP's religious leadership is not desirable for the new world.

26. d-11 by MUS:

- a. *IC: Religious leaders caused the last nuclear war.
- b. *IA1: Because religious leaders caused the last nuclear war, the YP might cause another nuclear war, and therefore the YP shouldn't be allowed into the bomb shelter.

27. f₁₂ by MUS:

a. EC: Medicine and music and philosophy are those things which provide people with the means of looking at the world and assessing it and maybe creating a better world.

28. d-₁₃ by MUS:

- a. *IC: Medicine and music do not involve religious conviction.
- b. *IC: Religious conviction is to be avoided.
- c. *IA₁: Because medicine and music do not involve religious conviction, and because religious conviction is to be avoided, medicine and music are desirable for the new world.

29. d-₁₄ by MUS:

- a. *IC: Science and religion caused the last nuclear war.
- b. *IA₁: Because science and religion caused the last nuclear war, they are not the solution for the new world, and therefore the YP's religious leadership is not the solution for the new world.

30. f₁₅ by MUS:

- a. EC: Medicine and music are non-judgmental.
- b. *IC: To be non-judgmental is good.
- c. *E/IA₁: Because medicine and music are non-judgmental, and to be non-judgmental is good, therefore medicine and music are desirable for the new world.

31. f₁₆ by MUS:

a. *IC: To be for all people is to be non-judgmental.

32. f₁₇ by MUS:

a. *IC: To be entirely focussed on the beneficial aspects of human behaviour is to be non-judgmental.

33. f₁₈ by MUS:

a. EC: What we're going to need in this new world are people who are in the helping professions, people who are giving and who are creating, who are helping people to experience a better form of life.

34. d-19 by MUS:

- a. EC: Bob (DR) and I (MUS) should definitely be the two people who go into this shelter.
- b. *E/IA₁: Because Bob (DR) and I (MUS) should definitely be the two people who go into the bomb shelter, the YP and CS should not be allowed to go into the bomb shelter.

35. d+20 by CS:

a. EC: You need some people who are in the helping professions.

36. d_{-21} by CS:

- EC: You also need some people who are involved in the more hard sciences
- b. *IC: People in the helping professions are not the only people you need.

37. f₂₂ by CS:

a. EC: If you have a whole bunch of people that are involved in the helping professions and only one person who's in the hard sciences, you may end up with a situation where you end up in the same nuclear war that we're in now.

38. f₂₂ by CS:

a. EC: If you have a whole bunch of people that are involved in the helping professions and only one person who's in the hard sciences, you don't have enough people monitoring the situation or understanding the situation well enough to prevent it from happening again.

39. f₂₄ by CS:

- a. *IC: Being a scientist is important.
- b. *IC: Being able to talk with the youth is important.
- c. *IC: The youth are important.

40. d-25 by CS:

- a. EC: From my (CS's) background and his (YP's) background I think we (YP and CS) would make an excellent team to discuss with the youth about how to prevent this from happening again.
- b. *IC: Talking with the youth is important.
- c. *IC: The youth are important.
- d. *E/IA₁: Because from my (CS's) background and this (YP's) background I think we (YP and CS) would make an excellent team to discuss with the youth about how to prevent this from happening again, and because talking with the youth is important, and because the youth are important, therefore the YP and I (CS) should be allowed into the bomb shelter.
- 41. $d+_{26}$ by DR:
 - a. *IC: Being a scientist is important.
 - b. *IC: Working with computers is important.
- 42. f₂₇ by DR:
 - a. EC: In getting my (DR's) doctoral in Public Administration I (DR) had to acquire a lot of knowledge about computers.
- 43. d-28 by DR:
 - a. *IC: I (DR) have the same capabilities with computers as the CS.
 - b. *IA1: Because I (DR) have the same capacity with computers as the CS, the CS is not needed in the new world, and therefore the CS should not be allowed into the bomb shelter.
- 44. f₂₉ by DR:
 - a. EC: I've (DR) also had a lot of experience working with people.
- 45. $d+_{30}$ by DR:

- a. *IC: Working with the youth is important.
- b. *IC: The youth are important.
- 46. f₃₁ by DR:
 - a. EC: The people I've (DR) been working with are primarily people on the medical staff at the hospital.
 - b. *IC: People on the medical staff at the hospital are young.
- 47. d_{32} by DR:

- a. *IC: I (DR) have the same capabilities in talking with the youth as the YP and CS.
- b. *IA1: Because I (DR) have the same capabilities in talking with the youth as the YP and CS, the YP and CS are not needed in the new world, and therefore the YP and CS should not be allowed into the bomb shelter.

48. f₃₃ by DR:

a. EC: My (DR's) strengths are in the sciences.

49. d_{34} by DR:

- a. EC: We also need somebody that's a well-recognized individual to be able to continue to promote the culture that we've developed.
- b. *IC: The MUS is a well-recognized individual.
- c. *E/IA₁: Because we also need somebody that's a well-recognized individual to be able to continue to promote the culture that we've developed, the MUS should be allowed into the bomb shelter.

50. f₃₅ by DR:

a. EC: We don't want to lose the culture.

51. f₃₆ by DR:

a. EC: If individuals lose their culture, they're going to feel a much greater loss than they would be just having lost friends and relatives.

52. d-37 by DR:

- a. EC: It's important that we maintain the level of knowledge that we have now in botany and zoology and Administration and that we continue with the arts.
- b. *EC: Having me (DR) around in the new world will ensure that we maintain the level of knowledge that we have now in botany and zoology and Administration.
- c. *EC: Having the MUS around in the new world will ensure that we continue with the arts.
- d. *E/IA1: Because it is important that we maintain the level of knowledge that we have now in botany and zoology and Administration and that we continue with the arts, and because having me (DR) around in the new world will ensure that we maintain the level of knowledge that we have now in botany and zoology and Administration, and because having the MUS around in the new world will ensure that we continue with the arts, I (DR) and the MUS should be allowed into the bomb shelter.

Table 4. Formulaic Representation of the Entire Argument₂1

- 1. Interactional Level:
 - a. F₁ by YP followed by
 - b. D-2 by MUS followed by
 - c. D_{3} by CS followed by
 - d. D-4 by DR
- 2. Topic Level:
 - a. $\{(F_1)F_2\}$ by YP followed by
 - b. $\{D-3D-4\}D-5\}$ by MUS followed by
 - c. $\{(D-6)D-7\}$ by CS followed by
 - d. $\{(D-8 D-9 D-10)D-11\}$ by DR
- 3. Sentence Level:
 - a. $\{[f_1f_2][(f_3(f_4),f_5f_6,f_7(f_8))f_9]\}$ by YP followed by
 - b. $\{[d-10(f_{11})][f_{12}(d-13),d-14f_{15}f_{16}f_{17} f_{18}][d-19]\}$ by MUS followed by
 - c. $\{[d+20,d-21(f_{22}(f_{23}))][(f_{24})d-25]\}$ by CS followed by
 - d. $\{ [d+_{26},(f_{27})d-_{28}][(f_{29},d+_{30}(f_{31}))d-_{32}] [(f_{33})d-_{34}(f_{35}(f_{36}))] [d-_{37}] \} \text{ by DR}$

4. SUMMARY

There are several advantages to our analysis of $argument_2$ as a F/D-/D- sequence on three discourse levels. First, taking a generic characteristic approach reveals that $argument_2$ is an orderly discourse process. The coherence of $argument_2$ as a speech activity is based on the presence of the feature $argument_2$ both a cohesive and distinctive event.

Second, it is now clear that there are four elements which drive the process of argument₂. These are the (1) the subjectivity of Fs, (2) the strict conditional relevance between Fs and Ds, (3) the generic feature opposition and (4) the presence of argument₁ in argument₂. The subjectivity of Fs makes argument₂ possible. Because a speaker may mean one thing by a F and a hearer may take that F to mean another thing, argument₂ is always a possiblity in discourse. The strict relevance between Formulations and Decisions provides for the occurrence of an F/D pair, and a minimal F/D/D sequence in argument₂. Opposition constrains Ds initially to the response-type of D-. And, finally, the presence of argument₁ in argument₂ is what makes any relationship between Fs as F/D pairs possible. Our analysis shows that Fs are linked together in a relationship of opposition or agreement by their argument₁ products. Argument₁, then, is the substantive basis of argument₂.

Thirdly, our approach to argument₂ reflects the interpretive search for illocutionary force in argument₂. Only three of the argument₁ products which function in the argument₂ we have analysed are explicit. All the others are implicit, and these implicit claims and arguments₁ are easily tracked by listeners. As the next speaker, a listener-becomespeaker strategically responds to a selected number of these implicit claims and arguments₁, according to his or her own designs for the process of the argument₂.

The structure and (structural) process of argument₂ is then realized by the following dynamics of its process. We suggest that argument₂ initiation and resolution can be seen as a matter of control over F comment slots. A comment slot (Bilmes 1985) follows each F in an argument₂ into which a D by a subsequent speaker may be placed. Speakers, hearers and social norms all exercise control over comment slots, and so can influence the process of an argument₂ -- when and if it is to start, how it is to proceed, and if, when and how it is to be resolved.

As the person who will fill the slot, a listener (according to his or her own discourse designs) may fill the slot, either with a D- to initiate or complete uptake of an argument2, or with a D+ when an argument2 is supposed to be working towards resolution. A speaker can control the comment slot of his or her own F by framing it for a particular type of hearer response (that is, F, D-, D+, or no response). Such slot-framing can be achieved through various structuring techniques or structural devices. A structuring technique which frames a slot for a D+ is the entry of an argument3 within a turn-at-talk, since, by digressing into Rhetorical argument, a speaker may state a case more fully for purposes of persuasion. Structural devices for D+ framing include device like the negative tag-question and or Canadian 'eh?' (Shahin 1990). Various social norms can also help to frame comment slots. For example, in the 'political discourse' which evokes socio-politically prescribed modes of talking (see Foucault 1972; Chilton 1985; Shapiro 1981), normative expectations will influence talk with implications of local, national or global proportion.

In sum, then, we have attempted to provide an ordered analysis of the structure and process of argument₂. We suggest that the approach presented here offers a promising basis for the future study of argumentative discourse.

NOTES

- [1] An earlier version of this paper was presented at the Second International ISSA Conference on Argumentation (Amsterdam, June 22, 1990). The paper is based on Shahin (1989), Opposition in the Discourse of Argument, unpublished Master's thesis, University of Victoria.
- [2] This example is taken from the play *The Mousetrap* by Agatha Christie. It is part of a larger argument₂ in which Mrs. Boyle criticizes the rooming house run by Mollie and her husband.
- [3] O'Keefe and Benoit also state that "interactants can degrade or reject each other's self-identities" (p.162). Since self-identity is a type of belief, this manner of opposition is included in the statement that participants align themselves in differing ways toward some goal(s), act(s) or belief(s).
- [4] The text of that argument₂ discourse is presented in Shahin (1989). We are grateful to J. B. Bavelas, Department of Psychology, University of Victoria, for permission to use this data.
- [5] The deliberate ordering of discourse turns by the four participants in the first argument₂ (same-pair speakers not speaking consecutively) shows the participants' intuitive knowledge -- having been instructed to 'discuss' -- that having an argument is to produce a minimal F/D-/D- sequence. They attended to the interactional business at hand and had an argument₂ within the first three turns-at-talk.
- [6] Kopperschmidt (1985) gives two categories of statement types, PRO and CONTRA. The D+ of a prefaced disagreement (e.g., d+20 and d+26 of our data) suggests a third category: CONTRA-PRO, or perhaps CAPIT (capitulation).

REFERENCES

- Bavelas, J.B., L.E. Rogers and F.E. Millar (1985). "Interpersonal Conflict." In T.A. van Dijk, ed., Handbook of Discourse Analysis, vol. 4. New York: Academic Press. Pp. 9-26.
- Bilmes, J. (1981). "Proposition and Confrontation in a Legal Discussion." Semiotica, 34. Pp. 251-72.
- Bilmes, J. (1985). "Why That Now? Two Kinds of Conversational Meaning." Discourse Processes, 8. Pp. 319-35.
- Chilton, P., ed., (1985). Language and the Nuclear Arms Debate: Nukespeak Today. London: Frances Pinter (Publishers).
- J.R. Cox and C.A. Willard (1982). "Introduction: The Field of Argumentation." In J.R. Cox and C.A. Willard, eds., *Advances in Argumentation Theory and Research*. Carbondale: Southern Illinois University Press. Pp. xiii-xlvii.
- Foucault, M. (1972). The Archeology of Knowledge. New York: Pantheon Publishing Co..

- Garfinkel, H. and H. Sacks (1970). "On Formal Structures of Practical Actions." In J.C. McKinney and E.A. Tiryakian, eds., *Theoretical Sociology*. New York: Academic Press. Pp. 338-66.
- Heritage, J.C. and D.R. Watson (1979). "Formulations as Conversational Objects." In G. Psathas, ed., Everyday Language. New York: Irvington Publishers, Inc.. Pp. 123-59.
- Jackson, S. and S. Jacobs (1980). "Structure of Conversational Argument: Pragmatic Basis for the Enthymeme." Quarterly Journal of Speech, 66. Pp. 251-65.
- Kopperschmidt, J. (1985). "An Analysis of Arguentation." In T.A. van Dijk, ed., Handbook of Discourse Analysis, vol. 2. New York: Academic Press. Pp. 159-68.
- Millar, F.E., L.E. Rogers and J.B. Bavelas (1984). "Identifying Patterns of Verbal Conflict in Interpersonal Dynamics." The Western Journal of Speech Communication, 48. Pp. 231-46.
- O'Keefe, B.J. and P.J. Benoit (1982). "Children's Arguments." In J.R. Cox and C.A. Willard, eds., Advances in Argumentation Theory and Research. Carbondale: Southern Illinois University Press. Pp. 154-83.
- O'Keefe, D.J. (1977). "Two Concepts of Argument." Journal of the American Forensic Association, 13. Pp. 121-28.
- O'Keefe, D.J. (1982). "The Concepts of Argument and Arguing." In J.R. Cox and C.A. Willard, eds., Advances in Argumentation Theory and Research. Carbondale: Southern Illinois University Press. Pp. 3-23.
- Pomerantz, A. (1975). "Agreeing with Assessments: Some Features of Preferred and Dispreferred Turn Shapes." In J.M. Atkinson and J. Heritage, eds., Structures of Social Action. Cambridge: Cambridge University Press. Pp. 57-101.
- Schiffrin, D. (1985). "Everyday Argument: The Organization of Diversity in Talk." In T.A. van Dijk, ed., *Handbook of Discourse Analysis*, vol. 3. New York: Academic Press. Pp. 35-46.
- Shahin, K.N. (1989) Opposition in the Discourse of Argument, unpublished Master's thesis, University of Victoria.
- Shahin, K.N. (1990) "Argument as a Formulation/Decision/Decision... Sequence." Argumentation, in press.
- Shapiro, M.J. (1981). Language and Political Understanding. New Haven: Yale University Press.
- Watzlawick, P., J.B. Bavelas and D.D. Jackson (1969). Pragmatics of Human Communication. New York: W.W. Norton and Co..
- Willard, C.A. (1979). "Argument as Epistemic II: A Constructivist/ Interactionist View of Reasons and Reasoning." *Journal of the American Forensic Association*, 15. Pp. 211–19.