

ON SOME CONJUNCTS SIGNALLING DISSONANCE IN WRITTEN EXPOSITORY ENGLISH*

ANN BORKIN

University of Michigan

English has a variety of means to indicate the logical progression of ideas in a text; one of the more obvious of these means is the use of adverbial connections like *therefore*, *nevertheless*, *similarly*, and *however*. For students learning to read and to write English expository prose, understanding the appropriate use of such words and phrases is important; however, I believe that the help teachers can give students is limited by the comparative lack of attention that has been paid in the past by linguists to grammatical structures as they relate to rhetorical concerns.

In this article, I discuss the conditions for a number of connectives (or, more specifically, *conjuncts*, c.f. Greenbaum 1969) which mark a particular kind of contrast that I will call *dissonance*. In examining conjuncts which express this kind of contrast, I will primarily be concerned with conjuncts whose effect typically depends heavily on inference on the part of the reader, and which are best understood with reference to a chain of reasoning or line of argumentation being developed by an author. The examples I cite are for the most part taken from articles in *Scientific American*; however, I have sometimes edited these examples for the sake of brevity and clarity, and I will also cite examples from sources other than *Scientific American* and from expository prose either not about science or about science but directed toward a more technical audience. This paper is not a study of contrastive conjuncts in a particular, well-defined corpus; rather, it is an attempt to explore the semantics and pragmatics of a small group of conjuncts expressing a

* This paper was presented at the 1978 TESOL Convention in Mexico City, Mexico.

certain kind of contrast in written English. I hope that the discussion as a whole will suggest reasons why it is inadequate to present these conjuncts to advanced students as expressing a binary relationship between two un-contextualized sentences.

I call conjuncts expressing the kind of contrast I am concerned with here *dissonant conjuncts*. In general, dissonant conjuncts mark the introduction of a statement or a group of statements that is viewed as in some sense in conflict with a prior statement or group of statements. For example, in (1), *yet* marks a seeming incompatibility between the stability of the DNA molecule and circumstances favoring instability.

- (1) One is impressed by the remarkable stability of the DNA molecule, an essential factor if species of organisms are to remain unchanged over many generations of growth. Yet the DNA must exist in a milieu of deleterious factors such as ultra-violet light (UV) that can alter or destroy its genetic message (*Endeavor* 31, p. 83).

In this example, *yet* expresses dissonance rather than a more generally contrastive relationship of difference, for there is an implied conflict between two states of affairs — that is, between the stability of the DNA molecule, on the one hand, and deleterious factors that promote change, or instability, on the other. Because of my interest in dissonance rather than mere difference, or opposition without conflict, I will not be concerned here with the conjuncts *in contrast*, *by contrast*, *conversely*, or with *on the other hand* as it is used in (2):

- (2) A legume has a high requirement for phosphorus and potassium, although it will usually provide its own nitrogen. A grass, on the other hand, has both a large requirement for nitrogen and a smaller but still significant requirement for phosphorus and potassium.

Although *on the other hand* can express dissonance, and does in other examples cited in this paper, in (2) it merely marks *dissimilarity* between two kinds of forage plants, without any suggestion of conflict. Similarly, I will not be concerned with the conjunct *on the contrary*, which typically follows a denial of an assertion with a stronger statement which amounts to a denial of the same assertion, as in (3).

- (3) The work is not restricted to special circumstances. On the contrary, it occurs routinely, and on a massive scale (J. C. McKinney and E. A. Tiryakian, *Theoretical sociology*, p. 353).

In (3), the force of the pre-connective statement taken as a whole, and the force of the post-connective statement, are actually in harmony rather than being dissonant, since both statements deny the routine nature of the work

being discussed. *On the contrary*, then, is another connective which expresses a kind of non-dissonant contrast which is not the concern of this paper.

For the purposes of this discussion, any two sections of text related by a conjunct will be called X and Y, X referring to the section preceding the conjunct and Y referring to the section following the conjunct. In all cases, pre-conjunct section X and post-conjunct section Y can be a sentence or a larger fragment of discourse. Dissonant conjuncts mark the introduction, in post-conjunct section Y, of an assertion or set of assertions viewed as at least potentially in conflict with a prior assertion or set of assertions in pre-connective section X.

Since the sense in which Y can be in conflict with X varies considerably, and since the appropriateness of particular conjuncts is related to these various senses, there are further distinctions to be made. The use of *despite this* and *in spite of this*, for example, seems to be restricted to marking the denial of a naturally expectable consequence of circumstances described in X. *Despite this* is therefore odd in an example like (4), which originally contained the conjunct *however*;

- (4) Bacteria that can grow well at low temperatures are called psychrophilic, or cold-loving. {However
?Despite this}, they do not grow faster at lower temperatures than other nonpsychrophilic bacteria do at higher temperatures (*Scientific American*, June, 1977, p. 42).

Despite this would be odd here because it would imply a ridiculous causal relationship between the name of a particular bacteria and its behavior. *Despite this* is appropriate, however, in (5).

- (5) The General Council of the TUC have inadvertently been hoist with their own petard. They rightly opposed 'In Place of Strife'. They also opposed the Tory Industrial Relations Act, as well as any type of statutory wages policy, and to avoid such legislation in the future entered into a 'social contract' with the Labour Party during its period in opposition. Part of that contract was a wages policy, although it was not considered by trade unionists to be the main part. *Despite this*, wages have become the central issue of the contract.

Here, pre-conjunct section X presents causal pressures *against* the state of affairs reported in Y; X contains background for understanding trade unionists' opposition to a wages policy and presents the information that a wages policy was not considered an important part of a 'social contract' with the Labour party, while post-conjunct section Y describes a situation which amounts to a frustration of the normally expectable consequences of what is reported in X.

Despite this and *in spite of this* are not the only dissonant conjuncts that can introduce a section of text, Y, which describes a situation which runs

counter to an expected consequence of a state of affairs described in a prior section of text, X; either *nevertheless* or *in spite of this*, for example, might be appropriate in (6):

(6) The Iraqi government opposed any intervention from the Red Cross.

{Nevertheless
In spite of this} — the International Committee of the Red Cross was able to discreetly make available to the Kurds some of the funds donated for them.

(6) is like (5) in that, in both of these examples, circumstances described in X favor consequences which are counter to those described in Y. *Despite this* and *in spite of this* are limited to the denial of an expected causal relationship; *vertheless* is not (nor is *even so* or *however*, although these connectives may also be found in contexts like that of (5) and (6)).

What seems to be of particular importance for the appropriateness of *nonetheless* and *nevertheless* (which I regard as equivalent) is that, on the basis of pre-connective section X, one would be likely to infer something other than what is presented in post-connective section Y. Naturally, then, *nevertheless* and *nonetheless* are appropriate in many of the same contexts as *despite this* and *in spite of this*, since the denial of an expected causal relationship is the denial of a particular type of inference, one based on prior consequences favoring a following state of affairs. However, inferences need not be based on cause-effect relationships; thus in (7), which is taken from an article concerned with certain archeological classifications, *nonetheless* is appropriate even though there is no plausible *causal* relationship between the number of tool assemblages belonging to particular groupings and the number of characteristics shared by these groupings.

(7) These higher groupings of course embrace a great many tool assemblages ... The higher groupings nonetheless share a substantial number of characteristics (*Scientific American*, February, 1976, p. 90).

In (7), *nonetheless*, rather than signalling the denial of an expected causal relationship, signals the denial of an expected negative correlation between groupings embracing a great many individual tool assemblages and sharing a substantial number of characteristics. In the fuller text of which (7) is a part, this expected negative correlation is made explicit, and I have underlined it in (8):

(8) These higher groupings of course embrace a great many tool assemblages, *and the more assemblages there are, the fewer detailed resemblances there will be between them.* Nonetheless, the higher groupings share a substantial number of characteristics.

The degree of explicitness in (8) is unusual; only rarely are the knowledge and assumptions necessary to understand a particular denied inference in a particular text made explicit in pre-connective section X, and often the inference

that is denied is not only left unstated but is understandable to only a very restricted audience. This is the case in (9), for example.

- (9) Such intermolecular reactions involving carbenes provide ready access to an immense variety of compounds. Nonetheless, much attention has also been focussed lately on the intermolecular version of cyclopropane formation (*Scientific American*, February, 1976, p. 106).

A reader not acquainted with the relevant technical discipline and possibly not having completely understood the text that precedes this fragment, will not be sure about the nature of the denied inference signalled by *nonetheless* in this example. I am such a reader; I cannot fill in the chain of inference with respect to which Y is dissonant, although I assume that *nonetheless* signals such dissonance here.¹

Understanding the use of a particular dissonant conjunct in a particular text rests on understanding the nature of the conflict that the conjunct is marking. In understanding general conditions for the appropriateness of each dissonant conjunct, it is important to understand the nature of the conflict which each conjunct typically signals. I have described general conditions for the appropriateness of *despite this* (and *in spite of this*), and *nevertheless* (and *nonetheless*), without introducing any very general or difficult linguistic distinctions; in order to describe general conditions for the appropriateness of *still*, however, I must make a distinction between *dissonance of an empirical nature* and *dissonance of a rhetorical nature*. I hope that this distinction will also be useful in understanding the use of other particular conjuncts in particular texts.²

¹ Also relevant for the appropriateness of *nevertheless* and *nonetheless* is the complexity of the chain of reasoning behind the inference that these conjuncts help to deny. Thus I feel that *nevertheless* is not as appropriate as *however*, or even *yet*, in (i), which is adapted from a composition by a native speaker of Chinese:

- (i) In a Chinese family, the mother stays at home and does the housework. Nevertheless, the situation in my family is completely different.

The dissonance in (i) results from a simple juxtaposition of generalization and exception. My feeling is that, when a plausible inference denied with the use of *nevertheless* is not based on an expected cause-effect relationship, the inference that is denied must be based on a chain of reasoning of some complexity, at least more complicated than that which an exception to a generalization denies.

² The *empirical* versus *rhetorical* distinction is similar to a distinction called *external* versus *internal* by Halliday and Hasan, and so the discussion in this paper will be strongly reminiscent of discussions in Halliday and Hasan (1976: 13, 26-27, 238, 240-241, 252-253, etc.). In fact, the difference between the two distinctions puzzles me, since our discussions are so similar but the results are so different; thus, Halliday and Hasan consider *by contrast* to be internal and *nevertheless* and *on the other hand* (in the sense I am concerned with) to be external, whereas I would consider *by contrast* to be empirically oriented and the other two conjuncts to be sometimes empirically oriented and sometimes rhetorically oriented.

The text fragments in (4) through (8) represent instances of dissonance of an empirical nature. Briefly, understanding of this type of dissonance is based on knowledge of the world outside the text; that is, conjuncts which express dissonance of an empirical nature signal a conflict or potential conflict that is understood primarily with reference to knowledge and expectations about how the world works. *Despite this* and *in spite of this* thus are restricted to expressing dissonance of an empirical nature, since their use appears to be limited to denial of an expected causal relationship. *Nevertheless* and *nonetheless* may express this type of dissonance, but their use is not limited to it, as will be illustrated later.

Dissonance based primarily on knowledge of the world outside the text (dissonance of an empirical nature) is to be contrasted with dissonance based primarily on knowledge about the communicative intent of the author of the text (dissonance of a theoretical nature). For a rather crude example, consider the hypothetical text fragment in (10):

- (10) The weapon found on the suspect matches the description furnished by the witness. Still, it is a very common type of revolver, purchasable in any store specializing in small arms.

Pre-conjunct section X and post-conjunct section Y in this example most plausibly conflict only as they are relevant as conflicting evidence bearing on a conclusion under consideration. That is, the dissonance in (10) is understandable primarily with reference to the relevance of X and Y within a line of argumentation being developed in the text, in this case most probably the deliberation of whether a suspect is guilty or not, or whether there is enough evidence to convict him. The understanding of *still* in this hypothetical example is thus crucially tied to the communicative purposes of the writer; and in fact I believe that the dissonance marked by *still* is always related to an ongoing process of argumentation, evaluation, deliberation, or debate. It is in this sense that *still* expresses dissonance of a text-internal, rhetorical nature, as opposed to dissonance of an empirical nature, which is tied to notions of causality or other essentially text-external bases for expectations and likely inferences.

One set of dissonant conjuncts, *despite this* and *in spite of this*, seems to be limited to expressing dissonance of an empirical nature; one dissonant conjunct, *still*, seems to be limited to expressing dissonance of a rhetorical nature; other dissonant conjuncts seem to be able to signal either kind of dissonance, making the further practicability and usefulness of the distinction somewhat questionable. Which kind of dissonance is being marked by *nevertheless* in (11), for example?

- (11) Like so much of what passes for art history today or for what has come to be dignified by the name of picture research, this whole volume tells more about its authors

than it might about its subject... Anything approaching human understanding is reserved for the millenium to come.

Nevertheless, the selection of illustrations is certainly unusual and goes a long way to redeem the whole tone of the book (*The Economist*, June 5, 1976, p. 105).

I would analyze this as an example of dissonance of a rhetorical nature, since the conflict marked here by *nevertheless* results from the addition of a relatively favorable conclusion to an essentially negative book review; that is, the dissonance of Y here is primarily understandable with reference to what the author is doing, namely, evaluating, rather than any two sets of empirical facts he is relating. This example can be contrasted with the prior example (8), in which the dissonance is understandable with reference to technical knowledge about archaeology and not to the communicative intent of the writer. But the distinction is subtle, and I think that *nevertheless* and *nonetheless* are best described generally as cancelling a plausible inference, whether it be a higher-level inference made with the knowledge of the communicative intent of an author, or an inference about what is likely to be factually true, given information presented in X.

Also important for the understanding of dissonant conjuncts is the extent to which X is logically prior to Y. In that X always precedes Y, X always serves as background to some extent, and the effect of one section of text preceding another in a certain context is not calculable outside of that context; in addition, putting one message in front of another will have grammatical consequences for how each message is presented. However, with these important qualifications aside, several conjuncts assign nearly the same logical status to X and Y, and with these conjuncts the position of X and Y might be reversed with relatively little change in the logical relationship between them. *On the other hand* is one of these conjuncts. Like *nevertheless* and *nonetheless*, *on the other hand* can mark both dissonance of an empirical nature, as in (12), and dissonance of a rhetorical nature, as in (13).

(12) As a result medical institutions and individual investigators operate today with two powerful sets of values and goals. On the one hand there is the pursuit and advancement of scientific knowledge. On the other [hand] there is the provision of humane and effective therapy for patients (*Scientific American*, February, 1976, p. 30).

(13) For measuring "high frequency" range-change behavior over a short time interval, say several hours, the continuous phase-tracking provided by the Doppler system tends to be more accurate. On the other hand, successive range observations made once a day over a period of many days or weeks provide a more accurate measure of "low frequency" range-change behavior.

In both (12) and (13), X and Y are viewed as conflicting in result or anticipated result. In (12) the conflict is in the world outside the text, while in (13) the conflict is on a rhetorical level of evaluation, with X representing an argument

in favor of one system of measurement and Y representing an argument in favor of another. Although in both cases the post-connective position of Y gives it more emphasis, and although a change of position might call for a change in wording, the positions of what is described in X and Y in these two examples could be changed with very little difference in the conflict expressed in them. In this sense, *on the other hand* expresses a symmetrical relationship between X and Y. Other connectives marking a relatively symmetrical relationship are *yet* and *at the same time*, which will be discussed later.

The symmetrical relationship expressed by *on the other hand*, *at the same time* and *yet* contrasts with the asymmetrical relationship expressed by the other dissonant conjuncts. For example, like most dissonant conjuncts, *even so* can mark variance between X and Y both in terms of the world outside the text, as in (14), and in terms of a line of argument being developed within the text, as in (15).

(14) ... the Zephyr, unlike the Airflow, was widely praised in the automotive press. Even so, its sales too were slow at first (*Scientific American*, August, 1977, p. 123).

(15) A Healey type agreement can help in many ways. Even so, the four-pound maximum part of such an agreement will act too viciously on differentials.

However, (unlike *on the other hand*, *at the same time*, and *yet*) *even so* does not give equal logical status to X and Y period. As an empirically oriented conjunct, *even so* requires that X be both logically and linearly prior to Y, as it is in (14); in this example, the logical order of circumstance and denied consequence is preserved by the linear order of circumstance in X and denied consequence in Y. As a rhetorically oriented conjunct, *even so* is also asymmetrical, in that it indicates that Y is more forceful than X. In (15), for example, X and Y present a favorable and a critical judgment, respectively, but I feel that the criticism in Y is more forceful and that the overall evaluation of the Healey agreement in (15) is negative.

There are many other factors influencing the appropriateness of particular conjuncts in particular contexts; with the exception of *however*, which is more generally contrastive than any of the other conjuncts discussed here, each conjunct has idiosyncratic characteristics which often make it not freely substitutable for a similar conjunct in the same context. In the rest of this paper, I will briefly review some of the more salient item-peculiar characteristics of dissonant conjuncts, and will conclude by discussing the importance of understanding these conjuncts within the context of a discourse that is more complex than a binary juxtaposition of two sentences.

I have stated that *on the other hand*, *at the same time* and *yet* express a relatively symmetrical relationship between X and Y. I believe this is true; however, *at the same time* and *yet* are restricted in ways that *on the other hand* is not. Literally, *at the same time* marks a co-temporal relationship that is remark-

able in some way, and even when *at the same time* is used primarily to mark a logical rather than a temporal relationship, surface tense markings must be congruent with its literal temporal sense. Apart from this, the most important item-peculiar characteristic of *at the same time* is that it is particularly appropriate when a possible inference based on X and a possible inference based on Y are viewed as contradictory. An example of this is found in (16):

- (16) The Masovian is perhaps the best represented of all Final Paleolithic cultures on the European plain; in Poland alone more than 620 sites have yielded Masovian tool assemblages. At the same time the Masovian culture is basically similar to the Ahrensburgian, and it seems inescapable that both are subdivisions of a single larger unit (*Scientific American*, February, 1976, p. 93).

Here, a possible inference on the basis of X — that the Masovian culture was of a degree of importance high enough to merit a separate and superordinate classification — is countered by a likely inference on the basis of Y — that it does not merit a separate and superordinate classification. The passage goes on to make explicit the correct inference, with the statement “it seems inescapable that both are subdivisions of a single larger unit”.

Yet is typically analyzed as a concessive conjunct expressing that Y is surprising *in view of* X (c.f. Greenbaum 1969:37), and in fact the asymmetry that this analysis implies often seems to be present in actual texts. However, I believe that *yet* basically functions to mark seeming inconsistency between X and Y and to emphasize the surprising, puzzling, or problematic nature of this inconsistency. Notice that although the dissonance in (1), repeated below, can be analyzed in terms of conflict between a circumstance and a denied expected consequence of that circumstance, the symmetrical nature of *yet* allows a logically *prior* set of circumstances to be described *after* the description of resistance to these circumstances.

- (1) One is impressed by the remarkable stability of the DNA molecule, an essential factor if species of organisms are to remain unchanged over many generations of growth. Yet the DNA must exist in a milieu of deleterious factors such as ultraviolet light (UV) that can alter or destroy its genetic message.

Here, the deleterious factors mentioned in post-conjunct Y represent circumstances favoring instability of the DNA molecule, and pre-conjunct X describes a state of affairs which is opposite to the expected consequence of circumstances described in Y; that is, X presents a stability of the DNA molecule which is surprising (“remarkable”) in view of the circumstances described in Y. This kind of switch of circumstance-denied consequence order cannot take place with a connective expressing a more asymmetrical relationship; *despite this*, for instance, would not be appropriate in (1).

I have said that *even so* is an asymmetrical conjunct which marks dissonance both of an empirical and of a rhetorical nature, and that in each case,

even so implies that X is very strong but that Y is even more strong than X. When *even so* is used to mark dissonance of an empirical nature, Y must deny an expected consequence of circumstances described in X; thus (like *despite this* and *in spite of this*) *even so* in (4) would imply a ridiculous causal relationship. An appropriately modified version of (4), presented in (17) below, illustrates this.

(17) Bacteria that can grow well at low temperatures are called psychophilic, or cold-loving. ?Even so, they do not grow faster at lower temperatures than other non-psychophilic bacteria do at higher temperatures.

Even so is unlike all other dissonant conjuncts in that if X describes a hypothetical situation, *even so* implies "even if this possibility is realized". In (18), for example, although X describes the need for particular care, and outlines the care required, *even so* excludes these modal elements of need and requirement, Y being paraphrasable as "Even if special care is *given*, many seedlings fail", rather than "Even if special care is *needed*, many seedlings fail".

(18) Particular care is required to see that the small seeds are planted shallowly enough for the tiny seedlings to emerge. Close contact between the seed and the soil is necessary to ensure that the germinating seed has a constant and adequate supply of moisture. For these reasons a smooth, firm seedbed is needed for the establishment of a good stand of forage. Even so, many seedlings fail... (*Scientific American*, February, 1976, p. 65).

The *so* of *even so* is analyzable as a clausal substitute (c.f. Halliday and Hasan 1976:139—140), and thus *even so*, at least when used with an empirical orientation, as in (21), typically excludes modality expressed in Y.

I have claimed that *still* is restricted to expressing dissonance of a rhetorical nature. More particularly, I believe that *still* is used when the general force of a section of text is in one direction, when X runs counter to this direction, and when the force of Y is counter to X but consistent with the main direction. This can be seen in (19).

(19) [a]... the Communists hope to improve on the 33% they won last year. [b] This is far from certain. The latest poll published by Rome's pro-Socialist daily *La Repubblica* showed Christian Democrats gaining by a percentage point, to put them three points beyond the Communists. Berlinguer, in a perhaps deliberately gloomy assessment last week, agreed with the trend. [c] Still, the prospects were never better for the so-called 'historic compromise'... [*Time*, June 14, 1976, p. 21]

[a] here marks a fragment representing the main "direction" of the text, the growing political power of Communism in Italy; [b] marks the introduction of evidence against the growth of Communist power; and [c] marks a generalization counter to [b] and consistent with the main direction. *Still* as a dissonant conjunct is thus similar to *still* as an aspectual adverbial, as in (20);

(20) The clerks were talking. We tried to interrupt. They still went on talking.

That is, in both the aspectual use of *still* and in the rhetorically-oriented use of *still*, *still* is associated with a description of a state of affairs that remains constant in spite of threatened or expected change. I believe that this characterization of *still* would explain the inappropriateness of *still* in (21), taken from a foreign student's writing in the field of linguistics.

- (21) In 34, 35 and 36 we find that the predicate agrees with the subject (pro)noun in gender and number. ?Still, a personal modal does not have to be a verb, as we see in 37, 38 and 39.

Since (21) was not part of a section of text whose purpose was to argue for a generalization consonant with "a personal modal does not have to be a verb", and since the pre-connective material in (21) was not being used as evidence against the verbal nature of personal modals, the use of *still* here is inappropriate.

There are other characteristics which distinguish between dissonant conjuncts; I have not discussed the possibilities or effects of the syntactic placement of conjuncts elsewhere than sentence-initially, for example, and I have largely ignored the most common of contrastive conjuncts, *however*, which is the most generally appropriate and can probably be safely substituted for all of the conjuncts discussed here. In the remainder of this paper, I would like to make explicit several difficulties with, and shortcomings of, the presentation to ESL students of contrastive connectives as expressing a binary logical relationship between one section of text (often a single sentence) and another section of text (also often a sentence) in a simple sequence divorced from a larger context. Such an approach may be adequate for some pedagogical purposes; however, I believe it is misleading for students learning to read and write expository English of some length and complexity. First, the effect of conjuncts expressing dissonance of a rhetorical nature is by definition not understandable outside of the ongoing process of communication in which they play a role; thus uncontextualized presentation of these conjuncts will either rely on their functioning to mark dissonance of an empirical nature or will rely on the students' supplying a discourse context for them. Second, if I am right about *still*, the appropriateness of at least one conjunct is understandable only with reference to a complex rhetorical structure in which this conjunct not only marks dissonance between X and Y but a higher level relationship of harmony between Y and the context in which both X and Y are found.

Finally, uncontextualized presentation totally ignores the important rhetorical uses to which dissonant conjuncts can be put. Dissonance, like other types of contrast, is rarely used for its own sake; rather, it typically functions as a part of larger and more complex rhetorical patterns. Thus *yet* (which, I have suggested, basically functions to mark a seeming inconsistency between X and Y and to emphasize the surprising or puzzling nature of this inconsis-

ency) is particularly useful for setting up problems which are to be resolved in following discussion. Two examples of this use are found in (22) and (23).

- (22) All these insects rely for their survival on vision, and all of them perceive the world through many-faceted compound eyes, yet their habits and their visual requirements are quite different. How does the compound eye work as an optical sampling device? To what extent does it reveal the functions for which the insect uses its eyes? ... (*Scientific American*, July, 1977, p. 108).
- (23) Retinal itself does not absorb in the visible spectrum; it has a broad absorption band at about 380 nanometers, and in its protein-linked form it should absorb at about 370 nanometers. Yet the major absorption band for the purple membrane material and for most visual pigments is at much longer wave-lengths. This red shift is explained by the particular conditions under which the retinal is complexed with its protein: ... (*Scientific American*, June, 1976, p. 42).

In (22), which was extracted from the introductory section of an article, problems for later discussion are detailed in a list; the dissonance marked by *yet* sets the stage for these problems, and a large part of the rest of the article is devoted to answering them. In (23), the problem itself is not made as explicit; *yet* marks a problem-posing inconsistency, and resolution of the problem immediately follows. In these two examples, the rhetorical use of *yet* is similar, and in fact I believe that these are not isolated instances, although it is by no means true that *yet* is restricted to functioning as it does in (22) and (23).

I have found a similarly generalizable use of *nevertheless*. The following examples of this use are taken from *Scientific American*, but I have found other examples in newsmagazines.

- (24) [a]... the reasonable agreement between these predictions and the measured value completes a theoretical description of the liquid that includes successful calculations of all the properties I have discussed here.
- Nevertheless, [b] there is one region of the phase diagram that is far from being understood. [c] It is the region of density where the excitons may dissociate to form a gas made up of electrons and holes before condensing to form a liquid... (*Scientific American*, June, 1976, p. 36).
- (25) [a] These must have been millenniums of considerable growth of population throughout Greece, as the establishment of the Paralia settlement itself suggests. Nevertheless, [b] a slight puzzle remains. [c] In spite of the implication of permanence normally associated with an agricultural way of life and in spite of the presence of stone structures, we still lack evidence of overwinter occupation at Franchthi (*Scientific American*, June, 1976, p. 84).

The progression that (24) and (25) have in common can be schematized in three parts, here marked by [a], [b], and [c]. [a] functions as a summary of previous text, and [b], introduced by *nevertheless*, announces the existence of remaining problems, which are then discussed in [c]. Perhaps this should be analyzed as a binary contrast between X (or *a*) and Y (here, *b* and *c*), with a structure internal to Y; in any case, the dissonance expressed by *nevertheless* in these examples

seems to lie in the apparently satisfactory conclusion of one stage of inquiry, on the one hand, and a question or questions that remain unanswered, on the other. Typically, it is an announcement of the presence of these residual questions that is introduced by *nevertheless*.

Most of this paper has been devoted to characterizing the conditions for the appropriateness of dissonant conjuncts, without examining more particular rhetorical uses to which these conjuncts can be put. I have shown ways in which particular conjuncts similar in function are not freely substitutable for each other with the same effect, and I have argued that the contrast marked by dissonant conjuncts is often understandable only with reference to an on-going communicative process. Both the non-substitutability of similar conjuncts and the importance of context for understanding dissonant conjuncts show the inadequacy of presenting groups of conjuncts to students as expressing similar kinds of contrast between two uncontextualized sentences. I have also given two instances of apparently conventionalized expository "progressions" in which two dissonant conjuncts are typically used. I do not know to what extent, in any type of English, dissonant conjuncts function in formulaic progressions discernible across particular texts, but it seems to me that learning a general "meaning" of any conjunct without exploring its rhetorical uses is very like learning the meaning of an adjective without exploring its collocational possibilities. For this reason too, then, dissonant conjuncts are inseparable from the larger discourse contexts in which they appear.³

REFERENCES

- Arapoff, N. 1968. "The semantic role of sentence connectors in extra-sentence logical relationships". *TESOL quarterly* 4. 243-353.
- Greenbaum, S. 1969. *Studies in English adverbial usage*. Coral Gables: University of Miami Press.
- Halliday, M. A. K. and R. Hasan. 1976. *Cohesion in English*. London: Longman.
- Quirk, R. 1954. *The concessive relation in Old English poetry*. New Haven: Yale University Press.
- Yee, C. T. S. 1975. "Sequence signals in technical English". *RELIC journal* 6. 63-101.
- Young, R. E., Becker, A. L. and K. L. Pike. 1970. *Rhetoric: discovery and change*. New York: Harcourt, Brace and World.

³ I would like to thank John Lawler, and especially Larry Selinker, for help in formulating and clarifying the ideas presented here. Neither of these kind and generous colleagues has seen the final draft or is responsible for the weaknesses that remain.