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# Teaching the Recognition of Cohesive Ties in Reading a Foreign Language

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In recent years there has been a welcome re-orientation, in teaching reading, to greater emphasis being given to texture, i.e. the essential characteristics of text. Within this re-orientation, cohesion is gradually being given greater attention. This article outlines the system of cohesive relations in English, describes problematic instances in the recognition of cohesive ties, suggests appropriate teaching materials, and recommends associated classroom procedures. It is suggested that the materials and procedures described have relevance to teaching the recognition of textual cohesive ties in any foreign language.

## COHESION AND TEXTURE

The concerns of applied linguistics swing pendulum-like between focus on larger and smaller elements. Thus, from a pre-occupation with segmental sounds just a decade ago, phonetics is now switching its attention to areas such as intonation discourse. Similarly, from the Rhetoric of the days of Aristotle, the pendulum swung to Chomsky's sentence-constrained transformational grammar, and now back to concern with texture, i.e. the properties that characterize text and that distinguish it from non-text.

Language-teaching, in drawing on the attentions of applied linguistics, has also in recent years concerned itself increasingly with the essential characteristics of text. Thus, in reading, we are today less occupied with the minutiae of words and word-parts, and more with texture. One important aspect of texture is cohesion.

Textual cohesion is a semantic concept. It is concerned with semantic relations within a text (both within and between sentences), such that the reader's ability to interpret a particular textual element depends on his ability to interpret another element. The elements are tied: thus we talk of *cohesive ties* in text. And inter-element semantic cohesion is one of the major features that enables a fluent reader to distinguish text from a random string of discrete sentences.

## THE COMPONENT ELEMENTS OF COHESION

To illustrate a system of textual cohesion, and to explore its applications in teaching reading, this article will concern itself with cohesion in English. But the principles and practices described will have relevance in teaching reading in any foreign language.

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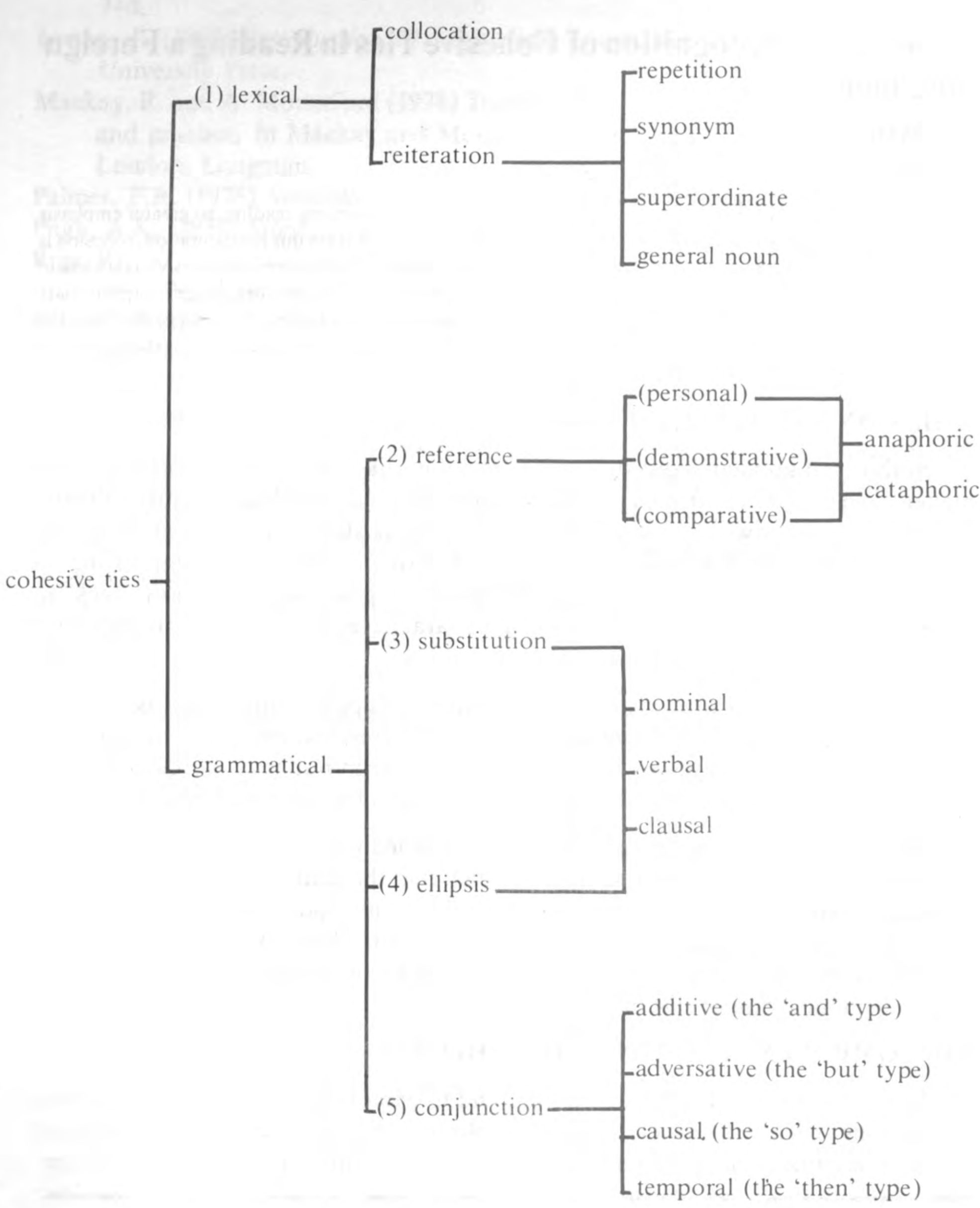
A major advance in our understanding of how cohesion operates in English text is Halliday and Hasan's *Cohesion in English* (1976). An outline of the system they describe is:




Most of the examples cited in Halliday and Hasan are of cohesion across sentence boundaries. But, as Halliday and Hasan themselves say, "Since cohesive relations are

not concerned with structure, they may be found just as well within a sentence as between sentences." (1976: 8-9) Therefore, this article is concerned with both inter- and intra-sentence cohesion.

All five elements of textual cohesion can be seen in the following text:

> The great aqueducts built by the Romans were originally designed to transport water from one place to another*. However it took them several centuries to realise that some of the water, when allowed to fall from the height of an aqueduct, could be used to power a corn-mill. Such a use of the aqueduct was to have an even greater impact on history than the original one.

Thus:

1) *water-water* is an instance of lexical cohesion (in this instance, repetition)
2) *the Romans* — *them* typifies personal anaphoric (= backward-pointing) reference
3) *a use* — *one* is an example of substitution — in this instance, nominal substitution
4) *one place* — *another** represents nominal ellipsis, i.e. the word *place* is 'left unsaid' after *another*
5) *however* coheres with the whole of the preceding sentence. *However* belongs to the 'but' class of conjunctive items, and thus signals a change of direction in the text.

Such categories of cohesion are also found, of course, in other languages. For example, reference in Arabic:

استبعد يحيى ديكو رئيس منظمة الدول المصدرة للبترول
«اوبك» احتمال القيام بأي خفض في اسعار البترول في الوقت الذي
بدأ فيه التشاور مع اعضاء المنظمة حول اجراء محادثات طارئة
في جنيف يوم الاحد القادم حول توزيع حصص البترول داخل المنظمة.
وقال ديكو لدى مغادرته البحرين امس انه سيتشاور مع
الاعضاء الذين لم يحضروا مشاورات البحرين بشأن مؤتمر
اوبك القادم. واضاف قائلاً انه متفائل على نحو معقول
ازاء امكانية الوصول الى اتفاقية لتفادي انهيار الاسعار.

conjunction in French:

> Elles sont à l'heure actuelle de statuts et de nature très - trop - divers, *mais*

présentent toutes des avantages considérables. *Par exemple*, sur les 10,000 insuffisants rénaux traités par hémodialyse (1981), 1 900 le sont à domicile; ce qui, *d'une part*, améliore grandement leurs conditions de vie, *d'autre part*, limite les complications, le tout pour un coût trois fois moindre (500 à 600 francs la séance a domicile, contre 1 500 francs à l'hôpital). *Malgré cela*, l'effectif des malades ainsi traités stagne depuis 1977.

and lexical reiteration in Swahili:

Uundaji wa istilahi ni jambo lisiloepukika katika lugha yoyote kwa sababu kila wakati binadamu amekuwa akibuni dhana mpya ambazo huhitaji kupewa istilahi za kuziwakilisha. Jambo hili limesababishwa pia na maendeleo ya haraka katika nyanja mbalimbali za maarifa ya binadamu ambayo yamelazimisha kuundwa kwa dhana mpya au kubadilika kwa dhana zilizopo. Wakati mwingine maneno mapya huweza kuundwa ili kueleza dhana ambazo zina maneno yenye kuziwakilisha...

## WHAT DO WE KNOW ABOUT THE LEARNER'S DIFFICULTIES IN RECOGNIZING COHESIVE TIES?

Our knowledge about the learner's difficulties is sparse; but what information there is comes from both controlled studies and experience-based reports, in L1 and L2 situations. The L1 reader's difficulties with cohesive ties are important in that such difficulties will be even more pronounced with the L2 reader.

Garrod and Sanford (1977b), in experiments with adult L1 subjects, report readers' difficulties in identifying the preceding, more explicit co-referent to certain anaphoric items. In another experiment (1977a) they show that the time taken to read a sentence containing the second half of a lexically-conjoined tie is largely determined by the semantic distance between the two halves of the tie. In other words, all other content remaining constant, a pair of sentences containing a superordinate/subordinate lexical tie will take longer to read (i.e. is more difficult) than a pair containing a lexical tie involving repetition.

In an L1 study involving third-grade American children, Richek (1977) shows the important part played by anaphoric reference in comprehension. And Stoodt (1972), in a cloze study with fourth-grade American children, finds a significant relationship between reading comprehension and the comprehension of discourse markers.

In Britain, Chapman and Stokes (1980) report an on-going longitudinal study of the mastery of cohesive ties in reading by L1 British children. Again using cloze procedure, their research shows a developmental mastery (in groups aged 7/8, 10/11 and 13/14 years) of the ability to recognize ties formed by anaphoric reference and discourse markers. They further report that "some children are still attaining mastery over pronouns at the age of 14 years", and that discourse markers "present even the oldest children with considerable problems, and this has far-reaching pedagogical implications". In connection with the same study, Chapman (1979) adds: "We have evidence from our studies that those children who are beginning to read fluently have the ability to perceive the cohesive factors and are thus able to integrate the text semantically, for they are constructing a meaningful whole as they read".

In the L2 situation, Cohen et al (1979) investigated university students' reading of subject-specialist texts in English, in four complementary studies. Although the texts used were drawn from different disciplines and reflected different rhetorical structures, students (from those disciplines) encountered very similar problems - including syntactic markers of cohesion. "All four of the studies revealed that learners were not picking up the conjunctive words signalling cohesion, not even the more basic ones like *however* and *thus.* The informant in the genetics study, for example, noted that she had never known the meaning of *thus*, and had simply thought it marked off sentences."

The EFL literature also contains numerous experience-based reports of learners' difficulties in recognizing cohesive ties. For example, Pierce (1975) and Ewer (1980) both comment on the difficulties posed by discourse markers, and advise that much more attention should be given to this category of tie in teaching reading. Further, Mackay and Mountford (1976: 171) comment: "A knowledge of reference, equivalence and connectives ... when mastered by practice ... provide the advanced student with a strategy of comprehension which he can apply to any text ..."

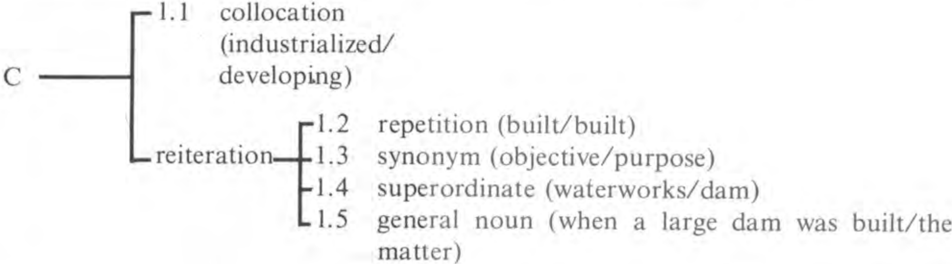
We thus have a growing body of evidence pointing to the important role played by cohesive ties in the process of reading. It is now necessary for us to examine, in turn, the five categories of tie; to investigate major potential sources of difficulty to the foreign reader; and suggest appropriate teaching materials, their sequencing, and their classroom use.

## 1. LEXICAL COHESION

The following text illustrates the various categories of lexical cohesion:

> Until fairly recently, nearly all waterworks in both industrialized and developing countries were originally built with one particular objective in mind. It might have been hydroelectric power, irrigation, swamp drainage or some other purpose. A secondary benefit, such as flood control in the case of a river in the Monsoon area, might have accrued when a large dam was built, but would not have been a primary consideration in the matter.

Lexical cohesion in this text may be summarized in the following way:




What categories of lexical cohesion cause most difficulty to the foreign reader of English? Collocation can be quickly dealt with. Collocation refers to the regular co-occurrence of certain words. For example *disease/illness, evening/dark, arid/fertile, doctor/hospital* and *computer/byte* regularly co-occur in the same context. But there would seem little gain in isolating collocation for specific attention within a text. For

example, drawing the reader's attention to *developing* and *particular*, and asking him to locate their respective collocates *industrialized* and *secondary* does not get us very far: the reader can either locate them, or he cannot. Thus we are testing, not teaching. A more fruitful approach would be to take a wider view, based on the realization that a reader's recognition of collocational ties depends in large measure on the *amount* of his reading. The reading teacher should therefore take all possible steps to encourage learners to read: class libraries, wall displays, teacher-example, graded readers, etc.

Of the four categories of lexical reiteration, clearly the more obvious the reiterative tie, then the stronger the reader's chances of identifying the lexically-cohesive connection. Thus, the cohesive tie *built/built* (repetition), is likely to be immediately identified by the reader. But the other types of lexically-reiterative tie have progressively less chance of identification. For example, the synonym tie *objective/purpose* is likely to be rather less readily identifiable and the superordinate tie *waterworks/hydroelectric power/irrigation/swamp drainage/flood control/dam* more difficult still. In other words, it would not be uncommon for a student, having read the text, to ask: "What is a waterworks?" — not having identified its superordinate status, and/or mistakenly assuming that *waterworks* ranked on the same level as *hydroelectric power, irrigation, etc.*

Particularly troublesome is the cohesive tie formed by a general noun, examples being:

> The Bank considered the desirability of staying open for business on Sundays. But it was feared that such a move might meet with little public response. Moreover, staff representatives were adamant that Bank employees would require triple pay for Sunday work. Management responded that the idea was out-of-the-question, and so the whole matter was shelved.

This text illustrates the two particular problems of general noun cohesion: the difficulty of forming a 'mental picture' of the meaning of general nouns, and the fact that they cohere not with a single word but with a wider stretch of meaning.

What can the teacher do to encourage the learner to recognise cohesive ties involving lexical reiteration? The first step, I suggest, is *demonstration* - simply indicating to the reader that such ties exist - by presenting texts marked-up in the manner indicated in the two texts above, and discussing with students the ties involved. This demonstration stage is best accompanied by an overhead transparency of the text concerned, with the teacher building up the ties by means of coloured washable pens, or a series of overlays.

Of course, our objective in the reading class is not linguistic analysis. Thus we must only deal with those items of lexical reiteration that are less readily-indentifiable. Similarly, we should be careful not to cloud the issue by using unnecessarily complex terminology. Terms such as *lexical reiteration, superordinate, general noun,* etc are ways in which linguists and teachers talk to each other. Such terms are not intended for classroom use. Instead, a term such as *vocabulary link* will suffice for lexical ties in general, with terms such as *words that mean the same, higher-level and lower-level words,* and *general nouns* to make finer distinctions. (Of course, there is no reason why such classroom terminology should not employ the readers' L1).

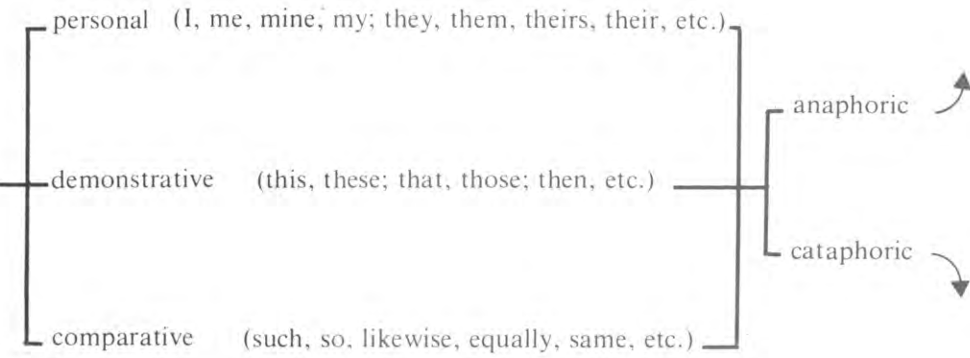
The second stage is to present a text with *one* element of the tie marked:

> The Bank next considered what it could do to assist employees to buy their own properties, in view of high interest rates and rising inflation. It was felt that this problem was particularly serious, and was affecting staff recruitment, as the cost of purchasing even a small apartment was beyond the reach of most employees. The Bank therefore decided to offer staff 25-year loans, at 4% below the public interest rate.

For each item circled, the student has to find, circle and connect the other end of the tie. (I invite my reader to do this, and also to name the three categories of lexical reiteration marked.)

The final stage is to present a text (or better still, ask students to bring their own texts), and ask them to identify and mark vocabulary links, such as *words that mean the same*, *higher-level* and *lower-level words*, and *general nouns*. Students work on the text in twos and threes, comparing and discussing their work, with the teacher acting as roving consultant. The emphasis is on the *process* they are engaging in, rather than the right-or-wrong product. Marked-up texts can be circulated among other groups, and then displayed on the classroom wall.

## 2. REFERENCE




The two types of textual reference (anaphoric and cataphoric) may be seen in the following text:

> In 1969 work began on the construction of a vast dam across the Zambesi River, near the border with Zambia. When complete, the Caborra Bassa dam (named after the rapids at which it is sited) will irrigate 1.6 million ha of land and produce 2200 mW of electric power. But since then, and particularly since its independence, Mozambique has become increasingly worried about the cost of completing and operating the project. Quite apart from the Mozambicans' natural unease at the cost, fierce controversy has surrounded the project from the earliest planning stages. At the heart of the controversy lies the question of who this investment of hundred of millions of dollars was designed to benefit. They themselves will not be directly affected, at least for many years, since it will not materially change their life-style to any appreciable extent.

The instances of *it* and *then* are anaphoric (= "pointing back") and cohere respectively with the previously-mentioned, more explicit *Caborra Bassa dam* and *1969*. Conversely, *its* is cataphoric (= "pointing forward"), and links with the about-to-be-mentioned, more explicit *Mozambique*. Anaphoric reference in text is frequent; cataphoric reference much rarer.

In the case of anaphoric reference, there are two common problems: divorcement, and ambiguity. By divorcement, I mean a considerable distance between the two elements of the cohesive tie. This may take the form of the explicit word or phrase being separated from its co-referent by three or four clauses or phrases, or even by one or two sentences. In terms of the process of reading, what happens is that the explicit word or phase is stored by the reader in short-term memory, and is recalled for linkage when the anaphoric end of the tie is read. But the greater the distance between the explicit end of the tie and its co-referent anaphoric item, then the more likely it is that the explicit item will have faded from short-term memory, thus reducing the chance of linkage. Examples are *then* and *they themselves* in the text above. The co-referent of *then* is marked. But what is the preceding co-referent of *they themselves?* The foreign learner may be unable to make the tie required.

The problem of ambiguity can be clearly seen in *it*. What does *it* cohere with— *investment? controversy? project?* Referential ambiguity of this nature — which we might call "unidentified flying pronouns" — can cause serious difficulty.

With regard to cataphoric reference, the problem is less that of divorcement or ambiguity (since the two ends of the tie are frequently close). Rather, it is a question of rarity, i.e. the reader is not accustomed to searching *forward* for the end of the tie, and so may take the more common step of searching backward — and mistakenly tie *its* with *Zambia*.

Focussing, then, on the specific difficulties the FL-reader faces in identifying referential cohesive ties involved in anaphoric divorcement and/or ambiguity, and cataphoric rarity, teaching again starts with demonstration — presenting texts with ties marked and connected as with the first three instances in the text above, and discussing with students the ties involved. Again, this demonstration stage is best accompanied by an overhead transparency of the text concerned, with the teacher building up the ties by means of coloured washable pens, or a series of overlays. As with lexical reiteration, we must be careful to deal only with items of reference that are not readily identifiable. (There is nothing more tedious to a student than having to perform a task whose solution is transparently obvious.) We also need to use terms that make plain their function, e.g. *pointing-back words* for anaphoric reference and *pointing-forward words* for cataphoric reference.

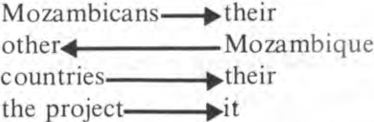
The next stage in teaching (learners in pairs) is to present a text with anaphoric and cataphoric items marked (problematic instances only), but with ties not connected:

> The construction of Caborra Bassa has already meant that 25,000 Mozambicans have had to move their villages to make way for the 240 km long lake. And - like other countries struggling to stand on their own feet in the middle of a world recession - that may well prove simply too expensive for Mozambique. Those who designed the project were surely unaware of the problems it was to face. The planners, construction engineers, economists and electrical engineers were out of their depth.

The learner has to identify, mark and link the other half of each tie. In the case of the anaphoric *that*, the learner faces the twin problems of divorcement and ambiguity. The syntax of number-agreement, of course, will help: *that* (singular) cannot co-refer with *25,000 Mozambicans, their villages* or *other countries*. The choice is therefore from among *The construction of Caborra Bassa*, *the 240km long lake*, or *the middle of a world recession*. We now encourage the student to ask: "WHAT may well prove simply too expensive ...?"

In the case of the cataphoric *Those*, the learner must resist his more natural tendency to search backward for an already-presented tie (*? villages, ? Mozambicans*), and instead search forward in the text.

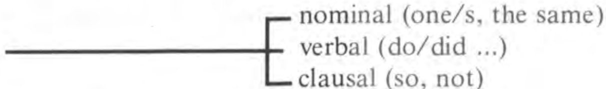
I have chosen to treat only these two instances of reference. There are, of course, several more instances in this text:




But my judgement is that these other instances would not pose difficulties for the foreign learner.

The final teaching stage involves group work - three or four learners per group. The teacher has previously found a set of different texts (or learners contribute their own). The texts are unmarked, and the learners' task is to identify referential ties that at first caused them difficulty, resolve any differences of opinion within the group, and circle/join the ties concerned. During this stage, the teacher circulates among the groups - encouraging, advising, and pointing out problematic ties that a group may have overlooked. The class then re-assembles to discuss their findings and to resolve any inter-group differences.

## 3. SUBSTITUTION




The list of items that occur as substitutes is very short - in fact, the complete five-item list is set out above and is exemplified in the following text:

> The use of wind power for sailing is of course well-known, and is recognized as having played a large part in the development of civilization. But for centuries the wind has also been harnessed for other mechanical tasks, in particular for pumping water. Simple windmills were in fact so used in ancient Persia and China. In recent times, more powerful ones have been used in Holland to make vast areas of land suitable for agriculture, by pumping away the sea-water. The Dutch also developed saw-mills, corn-mills, oil-mills and paper-mills - all of which worked just as efficiently as wind-mills did. Following Holland's success, many countries did the same. Most met with great success; some not.

A substitute, then, is an item used in text to avoid unnecessary and intrusive repetition of the more explicit item. Thus the text contains:

| the substitute | instead of repeating |
|---|---|
| so (clausal) | for pumping water |
| ones (nominal) | wind-mills |
| did (verbal) | worked ... efficiently |
| did (verbal) | developed |
| the same (nominal) | wind-mills, saw-mills, corn-mill, oil-mills and paper-mills |
| not (clausal) | did (not) meet with great success |

The efficient reader recognizes this closed set as constituting substitutes, and further recognizes the word(s) or clauses that have been substituted. In teaching, therefore, the procedure is identical to that of reference, i.e.

- demonstration of cohesive ties, by marking and joining pairs of ties as shown above (initially demonstrated by an overhead transparency)
- marking the substitute only, and requiring the learner to identify, mark and join the more explicit half of the tie
- using unmarked texts, on which the learner identifies, marks and joins ties of substitution

As with work on reference, instances of substitution selected for attention should be those which are most problematic, particularly divorcement and/or ambiguity. (Which instances would you select from the text above?)

## 4. ELLIPSIS

Ellipsis is 'substitution by zero'. That is to say, rather that being substituted in order to avoid unnecessary and intrusive repetition, an item is 'left unsaid'. This 'unsaidness' is ellipsis, and can be seen in the following text:

> 1973 was the 25th anniversary of the World Health Organization (WHO), and (1) was celebrated by a review of the health services throughout member countries. The overall picture was a depressing one. The standards of care for the majority of the world's people were seen to have remained extremely low, and in some countries (2) even fallen. Further, the review was particularly concerned to ascertain whether the quality of care available to the poor had risen. The report indicated (3) hardly at all.

The items that have been ellipted in this text are:

(1) *the 25th anniversary of the World Health Organization (WHO):* nominal
(2) *were seen to have:* verbal
(3) *the quality of care available to the poor had risen:* clausal.

The efficient reader's subskills in ellipsis involve:

- recognizing when ellipsis has occurred
- drawing on short-term memory and/or scanning the preceding text for help
- 'filling in' the ellipted item

Thus, with the instance of verbal ellipsis (2) above, the efficient reader:

- recognizes that an element has been ellipted before *even fallen,* because *countries* themselves cannot have fallen;
- draws on short-term memory in order to confirm WHAT has/have fallen; and
- 'fills in' *were seen to have*, and continues reading.

Of course, all of this takes place unconsciously and instantaneously: the efficient reader is not aware of having done so.

In the case of the foreign learner, however, the fact that something has been 'left unsaid' simply adds to his problems, with the result that the text 'does not make sense'. Thus, with the instance of verbal ellipsis just discussed, the foreign learner may read 'some countries have fallen', and will be puzzled as to what this means.

A particularly common problem with ellipsis is that the *immediate* context of the ellipted item persuades the learner to make sense of the dislocated syntax concerned. Thus, the learner 'understands' that part of the text in a different manner than the writer intended. For example:

> *A great need in some countries is more hospitals, and in other countries doctors.*

In this instance, the learner is quite likely to 'understand':

> *... and a great need is also doctors from other countries*

instead of the intended:

> *... and in other countries, a great need is doctors*

The reading teacher therefore needs to set up classroom work on text, that follows the efficient reader's approach to ellipsis, viz.

1. Aided by an overhead transparency demonstration, the teacher indicates ellipted items on the learner's text marked ∧, to indicate what has been 'left unsaid':

> Large numbers of people in developing countries are suffering and often dying from diseases which modern medical knowledge has the power to prevent or cure. Millions ∧ still suffer from leprosy, bilharzia, trachoma and yaws ...

The learner scans the preceding part of the text, searching for the ellipted element, being encouraged to draw on syntax and semantics for help. The learner then completes the tie as follows:

> Large numbers of people in developing countries are suffering and often dying from diseases which modern medical knowledge has the power to prevent or cure. Millions ∧ still suffer from leprosy, bilharzia, trachoma and yaws ...

2. The teacher then presents texts containing ellipsis, but this time not marked up. (Alternatively, learners can be encouraged to bring their own texts.) Learners

decide on problematic instances of ellipsis, and complete the elliptical ties as above.

As with other elements of cohesion, students again work in twos and threes, with the teacher as roving consultant. Again the emphasis is on problematic instances of ellipsis - particularly instances of immediate context misunderstanding, divorcement and/or ambiguity. And again we are primarily concerned with the cognitive processes that the learner is using, the objective being that the learner will then be able to use those processes in real-life, *non-* classroom reading.

## 5. CONJUNCTION (= discourse markers)

The system of conjunctive relations in English is very complex. (For a detailed table, see Halliday and Hasan 1976: 242-3.) It should be noted that Halliday and Hasan use the term *conjunction* in a different sense to its use in traditional grammar. Therefore, in this section I shall refer to *discourse markers.*

A simplified table of discourse markers (after Halliday and Hasan):

| *family* | *sub-family* | *common examples* |
|---|---|---|
| ADDITIVE | additive 'proper' | and, also, furthermore, in addition, moreover, |
| | negative | or, or else, alternatively |
| | expository | that is, in other words, i.e., |
| | exemplificatory | for instance, for example, |
| | similar | likewise, similarly, in the same way |
| ADVERSATIVE | adversative 'proper' | yet, though, but, however, nevertheless, |
| | avowal | in fact, actually, as a matter of fact |
| | correction of meaning | instead, rather, on the contrary |
| | dismissal | in any/either case |
| CAUSAL | causal general | so, then, hence, consequently |
| | reversed causal | for, because |
| | reason | for this reason, it follows |
| | result | as a result, in consequence, |
| | purpose | for this purpose, to this end |
| | conditional (direct) | then, that being the case, under the circumstances |
| | conditional (reversed polarity) | otherwise, under other circumstances |
| | respective (direct) | in this respect/regard |
| | respective (reversed polarity) | otherwise, in other respects |
| TEMPORAL | sequential | (at) first, to start with, next, finally, in conclusion |
| | summarizing | to sum up, in short, briefly |
| | past | previously, before this/that, hitherto |
| | present | at this point, here |
| | future | from now on, henceforward |
| | durative | meanwhile, in the meantime |
| | interrupted | soon, after a time |
| | simultaneous | just then, at the same time |

Discourse markers are very important in text, as they operate as a map reference: they tell the reader where he is going in relation to where he has just come from. Thus they operate like signposts on a road, giving the reader advance notice of

- going straight on (additive) e.g. *furthermore*
- changing direction (adversative) e.g. *however*
- the consequence of the part of the journey just completed (causal) e.g. *hence*
- the time sequence and ratio of part of the content of the text (temporal) e.g. *in short*

The following text illustrates the "signpost" function of discourse markers:

> It is generally agreed that the earth's capacity to provide resources and to absorb wastes must be finite. *Furthermore*, there is little argument but that the earth as a whole is overpopulated. *Hence*, action is urgently needed. As to the precise nature of that action, *however*, and how it is to be arrived at, there is great disagreement. *In short,* it is a problem which at present has no obvious solution.

What are the efficient reader's subskills in dealing with discourse markers?

- First, the efficient reader *recognizes* that a certain item is, in fact, a discourse marker. (Otherwise, the reader interprets it as just another word.)
- Next, he must *identify the function* of the discourse marker concerned, i.e. what type of proposition it is signalling. This functional identification enables him to predict the nature of the following information.
- To assist him in recognition and functional identification, the efficient reader is able to draw on his knowledge of *families* (and sub-families) of discourse markers, i.e. he knows that *for this reason* and *consequently* belong to the same family, but *in other words* and *nonetheless* to different families.

It follows that in teaching the foreign learner of English to recognise and interpret discourse markers, we should aim to draw as near as possible to the efficient reader's subskills. A major problem is that a discourse marker represents an abstract concept, so that it is difficult for the learner to form a mental image of the underlying proposition being expressed. One way of overcoming that problem is to use a system of symbols (and abbreviations) to give graphic reality to the abstract concepts being expressed. Many of the symbols already exist in English, Science and Mathematics:

| *symbol* | *class of discourse markers* | *examples* |
|---|---|---|
| $+$ | additive proper | moreover |
| $\Rightarrow$ | result | in consequence |
| $\therefore\rightarrow$ | causal general | hence |
| $\leftarrow\therefore$ | reversed causal | because |

| | | |
|---|---|---|
| ( ) | afterthought | incidentally |

We can add to these symbols, abbreviations in common use:

| | | |
|---|---|---|
| e.g. | exemplificatory | for instance |
| i.e. | expository | in other words |

And further symbols can be added from traffic signs:

| | | |
|---|---|---|
| | negative | alternatively |
| | adversative proper | on the other hand |

Still further can be invented:

| | | |
|---|---|---|
| | sequential | in conclusion |
| | resumptive | to return to the point |

The list of symbols should not be over-long. For example, for teaching purposes *result*, *conditional (direct)* and *reason* can all be collapsed under the ⟹ symbol. The important thing is that any such system should be as accurate as possible in graphically representing sub-families of discourse markers, easily understandable, and consistently used throughout the institution concerned.

What do we *do* with such a system? It largely compensates for the foreign learner's lack of quantity in reading. In other words, the efficient reader acquires his sub-skills in handling discourse markers not by being specifically taught them, but osmosis-fashion over years of regular reading. The foreign learner lacks this depth of reading, and in consequence his ability to handle discourse markers suffers. A system of symbols can therefore help in the following way:

1. To start with, the function of a discourse marker is indicated in text by its regular co-occurrence with the appropriate symbol, e.g.

   > It was only about two centuries ago - less than one-thousandth of man's existence - that the population growth pattern changed. New discoveries in medical science had a dramatic effect on the death-rate. Fewer children died in infancy, and adults lived longer. At the same time, the birth-rate stayed much the same - people were still having large families, even though they could expect most of their children to survive. Consequently, the population began to expand rapidly. Moreover, in the 20th century, this acceleration in population growth has begun to cause severe social and economic problems in many developing countries.

   As before, this demonstration stage is best accompanied by an overhead transparency.

2. As students absorb the function and family structure of discourse markers, those symbols can be dropped from commonly-occurring items, e.g. *however, moreover, therefore*. But their use would be retained for: rarer items (e.g. *despite this, on account of this, hitherto*); for discourse markers which also have an alternative, *non*-conjunctive function (e.g. *yet, rather, then, at the same time*); and

for discourse markers inconspicuously sited (e.g. in the middle of a sentence) and/or not signalled by punctuation, e.g.

> Many of the countries in which such problems are most serious however are also facing other, more pressing problems.

3. Next, as a self-checking stage, students are presented with a text (or they bring their own). Discourse markers are marked • in the following way:

   > The population of the world is not yet stabilising. It is expected to increase by 50% in the next 20 years alone. • Fortunately, many countries are now taking very seriously the threat of over-population. • Yet little firm action has yet been taken.

   Working in small groups, students discuss the function of the new discourse marker in relation to other discourse markers they are already familiar with; and they decide on, and mark the text with, an appropriate symbol. (Can you suggest appropriate symbols for the two discourse markers in this text?) The objective, of course, is to accelerate the foreign reader's recognition of discourse markers, and his understanding of their functions and family relationships.

4. Learners then work on texts which are *not* marked in any way. Their task is to identify instances of discourse markers, decide their function, and indicate that function with an appropriate symbol.

5. A further approach is that of "jumbled sentences". A text containing an assortment of discourse markers is cut up into sentences, and the sentences de-sequenced. Working in pairs, students use discourse marker signalling to re-order the sentences into their original sequence. This task further strengthens students' understanding of the influence of discourse markers on text structure. (It is advisable to mark all cut-up sentences from one original text, on the reverse, with a common colour or letter. This prevents inter-mixing when they are collected in. Sets should also be kept in separate envelopes.)

We have so far been considering only discourse *markers*; but we should not overlook the fact that conjunctive cohesion is often *un*marked, i.e. the conjunctive relationship is implicit. An example is: *Penicillin was a wonderful discovery. It has saved thousands of lives.* Urquhart (1976) stresses that it is important to consider such unmarked relationships in teaching, the point being that if learners are taught to interpret only overt markers, they will not be able to cope with instances of implicit conjunctive relationship. There are implicit conjunctive relationships in each of the two texts above. Can you identify and name them?

So far as *teaching* the recognition of implicit conjunctive relationships is concerned, this can be incorporated into stages 3, 4 and 5 above. In other words, in 3, implicit relationships are marked • in the usual way, and learners add the appropriate symbol. In 4, learners locate and add symbols to, both marked and unmarked conjunctive relationships. And in 5, learners are reminded to pay equal attention to unmarked relationships when re-ordering sentences.

## INTEGRATION OF ACTIVITIES INVOLVING THE RECOGNITION OF COHESIVE TIES

The preceding five sections have necessarily discussed the constituents of cohesion separately. We need now to consider how teaching the recognition of cohesive ties can be incorporated into the general framework of teaching reading in a foreign language.

The first stage *is*, I suggest, to treat the constituent categories separately - in order to familiarize the learner with the processes involved, and with associated terminology, but without the distraction of other matters. In other words, at this stage we are spotlighting just one category of textual cohesion. This spotlighting may take only a small part of a lesson, with the rest of the lesson perhaps treating the text for quite different purposes.

Progressively, however, new categories of cohesive tie are introduced and taught, and previous ones revised at the same time.

The stage is soon reached when the learner has been introduced to all five categories, and his new-found skills can be put to work in association with 'non-cohesion' skills (e.g. contextual guessing, text macrostructure, rhetorical relationships). At this fully-integrated stage, it is important to consider carefully the way in which the text and its associated tasks are laid out. The traditional layout is a vertical one, i.e. text followed by tasks (Fig. 1). However, such a layout does not replicate the *reality* of reading. In reality, we do not (first) read a text, *then* perform operations on that text in order to understand it. Instead - to follow the interactional model of the reading process (e.g. Goodman 1967) - the reader engages in a constant dialogue with the absent writer *throughout* the process of reading: predicting, testing, confirming, suspending belief, seeking clarification, etc. It follows that page layout should approach that reality as accurately as possible. And that in turn argues for *tasks* (on cohesion and on other matters) *to be sited as near as possible to the part of the text to which they relate.* This in turn suggests either a 'landscape format' in the case of bound materials, and/or 'A4 on its side' in the case of home-grown materials.

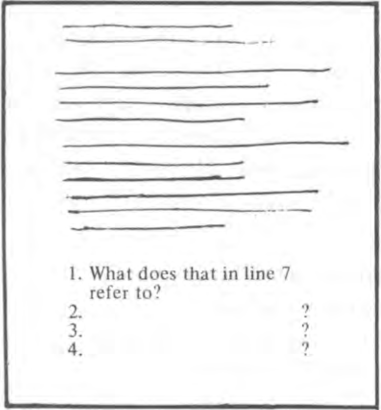



Fig. 1: traditional page layout

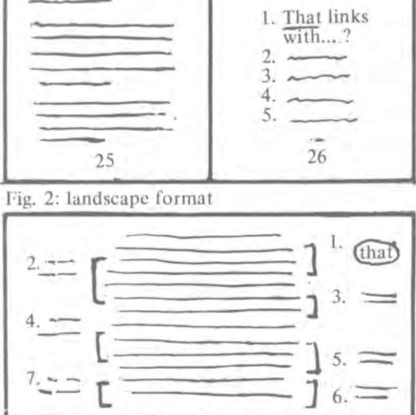



Fig. 2: landscape format

Fig. 3: A4 on its side

(One of the few reading courses in which tasks are sited as closely as possible to the text is *Reading and Thinking in English* (1979) - with its marginal micro-questions, and sub-text macro-questions.)

## SOME THOUGHTS ON THE USE OF TEXTS

It is inadvisable to treat cohesion by means of text-fragment, drill-type exercises, as the wider textual content is usually crucial in identifying cohesive ties. Thematically-complete texts are therefore preferable. Texts can be found in various sources: from existing textbooks, texts provided by the teacher, or provided by the learners. (The motivational advantage of having learners work on texts that *they* want to deal with cannot be overstressed.)

The reading teacher's stock-in-trade is texts - hundreds of them, many of local and/or national interest, in authentic typography and page layout, collected from a variety of sources, constantly added to, with a centrally-located master-file shared among colleagues. (Additionally valuable is an overhead transparency of each text, which the teacher can write on in washable colours (or use overlays) in order to demonstrate cohesive ties before and after groupwork). From such a large bank of texts, an appropriate text can easily be found to meet a particular purpose. Admittedly, such a practice costs money in reprographic expenditure. But those costs are a necessary part of the professional teaching of reading; and in any event they are only a fraction of salary and administrative costs. (In groupwork, of course, one text per group is sufficient.)

The use of sheets of texts means that they can be written on. More specifically in terms of cohesive ties, it means that elements of the tie can be circled and joined (in different colours to avoid confusion) - thus replicating the reality of reading, and leaving the learner with a pictorial representation of the cognitive processes involved in making cohesive ties.

In the case of published textbooks, of course it is not sensible to have learners mark pages in the ways described in this article - unless they have bought their own textbooks. The answer, perhaps, is for publishers to follow the lead of Primary English, and to produce workbooks - which of course are *designed* to be written in.

## PAIRWORK AND GROUPWORK

I have suggested that pairwork and groupwork should be used as much as possible, with whole-classwork being reserved for start-of-lesson 'this is what we are going to do and why' and end-of-lesson 'let's see how the work has gone'. The importance of pair/groupwork is that:

- It puts the responsibility for learning where it belongs: in the learner's head.
- It releases the teacher from a centre-stage role, and thus enables him to circulate among groups - advising, motivating, disambiguating, checking progress.
- The majority of the lesson is spent with learners *reading* - not listening or speaking.
- It focusses more attention on the cognitive processes involved in reading, and less on the 'right-or-wrong' product.
- It enables learners to learn from each other strategies of handling text that they can incorporate into their own overall strategies.

- The teacher, in circulating among and talking with groups, learns at first-hand the nature of the difficulties learners are encountering. This knowledge is then recycled into the preparation of more appropriate reading tasks.
- Groupwork is common in learners' other subjects, e.g. maths and science. (It is the *language teacher* who is unused to groupwork!)

For reading-teachers unused to the principles and practice of groupwork, I would advise consulting the methodology notes in the preface to the *Skills for Learning* (1980) series. Also valuable is Salimbene's (1981) excellent case-study of her first experience of groupwork.

## TERMINOLOGY

Throughout our discussion of the various categories of cohesive tie, I have stressed the importance of not using for teaching purposes the terminology of applied linguistics. Instead, classroom terminology should be as informative as possible, and consistently used. To bring together the suggestions for classroom terminology:

| *Halliday and Hasan (1976)* | *classroom alternative* |
|---|---|
| lexical reiteration | vocabulary link |
| synonym | synonym, or words that mean the same |
| superordinate | higher-level, lower-level words |
| general noun | general noun |
| anaphoric reference | pointing-back word |
| cataphoric reference | pointing-forward word |
| substitution | ? compressed word |
| ellipsis | words unsaid |
| conjunctive device | signpost |

Or, L1 versions of the classroom alternatives can be used.

## OTHER EXERCISE-TYPES

The approaches in this article to teaching the recognition of cohesive ties are designed to approximate to the reality of reading. Hence the emphasis on using text presented in its original form, and the learner marking ties on the text itself. But I would not wish my reader to think that this is the only approach. There are other exercise-types in common use. These include:

- removing discourse markers, and having the learner reinstate them unaided
- removing discourse markers, and having the learner reinstate them via multiple-choice, or from a randomized list
- requiring the identification of a reference tie via multiple-choice, or from a randomized list.
- requiring the identification of a reference or substitution tie, by the learner writing (not marking/joining) the other half, e.g. *What does **it** in line 6 refer to?*

I would not deny the value of such exercise-types, but I suggest they do not replicate the reality of reading so accurately as working on original, untampered text. Also, there is the additional element of 'understanding the question' in the exercise-types listed above; and multiple-choice items are notoriously difficult to construct. If necessary, then, I would only use such exercise-types as *supportive* of work on untampered texts.

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