

**Analysis of Written Discourse :  
An Experiment with English Texts**

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*Some ways in which discourse patterns are constructed out of clause relations have been explored in some detail. Three major patterns have been identified : the Epitome-Detail, the Evidence-Justification and the Query-Evidence. As models of organization, they show how far English discourse is scientific; almost all the texts depend upon evidence and exemplification in the presentation of thoughts and arguments.*

*An attempt is made to show how these patterns are indicated to the reader by means of such lexicogrammatical resources as lexical clues, grammatical connectives and repetition, how they can be analysed through questions and paraphrase tests in the light of context especially in cases where the sentence is not internally signalled as related to its predecessors in a particular way.*

**(1) Introduction**

It has been suggested by some linguists (e.g. Kaplan, 1972) that there are differences between languages in the patterning of thoughts and argument, that oriental writing, for instance, is indirect or circumlocutionary while English is more 'direct', i.e. more scientific. This paper sets out to investigate English<sup>(1)</sup> discourse in order to form an understanding of its real caliber. It attempts to examine the discourse<sup>(2)</sup> structure of a current sample of English texts so as to get to grips with its patterns of organisation<sup>(3)</sup> and the way thoughts and arguments are presented. It is based on such works on text linguistics as Halliday and Hassan (1976), Gutwinski (1976), Winter (1977) and Hoey (1983) among others. In these works the |text, i.e. | stretch of discourse, has

been chosen for analysis rather than the sentence taken as an independent unit for it is the text that can reflect the accomplishment of the communicative functions of language e.g. arguing , evaluating , responding , criticising , presenting , warning , etc . Such functions are discourse activities with goals. A text will be structured (i.e. given a pattern of organization) by the writer in service of such a goal (cf. Gumperz, et al., 1984, p.4) and the reader (or listener) will recognize that goal through his interpretation of the text helped by such other factors as his knowledge of the real world and the textual (or text forming) component of the linguistic system (see Halliday and Hassan, 1976, pp. 299-325) parts of which are cohesion and theme systems (see 3 below).

**(2) The data**

The findings of this paper are based on the analysis of 10 random texts (henceforth called ET1, ET2, etc.) taken from the English newspaper: "The Daily Telegraph," Oct.15, 1987 (see Appendix). The texts are mainly current previews, commentaries, spotlights and critiques on a wide variety of subjects (e.g. economy, industry, the arts, politics, fashion and sport). Though representing a number of discourse activities, they are largely argumentative. They discuss, present, instruct, criticise and warn in the main though occasionally they describe and narrate.

**(3) Analytic procedures**

The method employed in tackling the problem of describing discourse (here viewed as the product of semantic relations holding between sentences) is an adaptation of such analytic frames as contextualization (Firth, 1957), cohesive relations (Halliday and Hassan, 1976), and clause relations (Winter, 1971, 1977 and Hoey 1983). It seems necessary to go at some length into these analytic frames.

**(i) Context of situation**

Firth's contextualization or 'context of situation' - his claim that the occurrence or acceptability of an utterance in a situation is the only guarantee of its being significant - has been exploited in written discourse by placing a sentence in its context, i.e. its adjacent sentences within the discourse to show how its meaning and grammar can be explained if its larger context is taken into account.

(ii) Grammatical cohesion

Once a sentence is placed in its context, a complexity of intersentential relations accrue. Halliday and Hassan (1976, 299) account for these relations in terms of textual cohesion. Cohesion (through cohesive ties) expresses the continuity that exists between one part of the text and another. This continuity expresses at each stage in the discourse the points of contact with what has gone before. The lexicogrammatical resources which provide for the text cohesive relations are as follows : reference (either situational or textual), substitution, ellipsis, conjunction and lexical items (Halliday and Hassan, 1976, 308-325 ).

(iii) Clause relations organising discourse patterns.

Winter's analytic framework is similarly based on a view of discourse as the product of semantic relations holding between sentences and maintained by cohesive ties, lexical and grammatical. But whereas Halliday and Hassan consider each cohesive tie or relation in isolation, Winter and Hoey use them as key-clues to reveal the pattern (i.e. clause relational organisation) of a text as a whole.

Winter (1971) defines a clause relation as the cognitive process whereby the meaning of a sentence (or group of sentences) is interpreted in the light of its adjoining sentence or group of sentences. Thus clause relations are acts of interpretation by reader of what he encounters, in the light of what has already been encountered (Hoey, 1983,18).

Clause relations divide into two main categories: logical sequence relations (e.g. condition-consequence / instrument-achievement, etc) and matching relations (e.g. contrast and compatibility). Logical sequence relations are relations between successive events or ideas, whether actual or potential whereas in the matching relations statements are 'matched' against each other in terms of degrees of identity of description. The means by which a relation might be established in a discourse or passage are: grammatical connectives (e.g. subordinators (or adjuncts) and conjunctions (or conjuncts) , lexical signals and repetition. Projection into dialogue which may involve the use of questions and paraphrase are used as methods of clarifying the clause relations in the text. These lexico-grammatical methods are applied by Hoey (1983) to the finding of patterns in written discourses.

Here these procedures are tentatively utilised to clarify how discourse is organized in the corpus. In the practical application, the role of a cohesive tie in providing texture to the discourse is estimated mainly through its significance in communicating the functional relation holding between the sentences of the discourse. Thus the grammatical facts of cohesion as displayed by Halliday and Hassan are made inextricably bound up with the clause relations as presented by Winter and Hoey.

#### 4 Patterns typically built up in English discourse

##### 4.1 The Epitome - Detail pattern

The corpus under analysis reveals a frequent pattern of organization where a text begins with a summary sentence (the Epitome member) incorporating one or more clauses followed by details (forming the Detail member) in the rest of the text. It can be established, as will be seen, by projecting the discourse into dialogue using the (test) request 'Tell me the details of x' (x being the outline in the Epitome member).

Four texts<sup>(4)</sup> (out of ten) are representative of this pattern. Exemplification in the following analysis is mainly given from ET1.

##### Note

Here, as in all the texts we will be analysing throughout the paper, sentences are numbered for ease of reference. Cl clause, Q question.

Analysis of ET1: "Nobel prize is almost swept under carpet"

A The Epitome member (Sentence 1) :

I(a) Donald O. Cram thought (b) it was a practical joke (c)  
when a telephone caller from Stockholm woke him up yesterday  
with word (d) that he had won the Nobel chemistry prize, (e)  
a tough thing to do (f) when you make a living cleaning carpets.

This complex sentence semantically functioning as epitome in relation to the rest of the discourse (sentences 2-7, see p. ) can be analysed as :

Situation (i.e. context ) : c,d

Problem (i.e. aspect of situation requiring response ) : d

Response ( to problem ) : a , b

Evaluation ( of Response ) : e

Basis for Evaluation : f

These relations could be established and justified as follows :

#### Situation

Clause C gives context ( i.e. Verbal action indicating , *inter alia*, place and time ) to the discourse. One explicit clue to its function is the situational use of the subordinator ' when '. Converting the discourse into dialogue form , another clue can be attested thus:

Cl a,b : Donald O. Cram thought it ( i.e the news)was a practical joke.

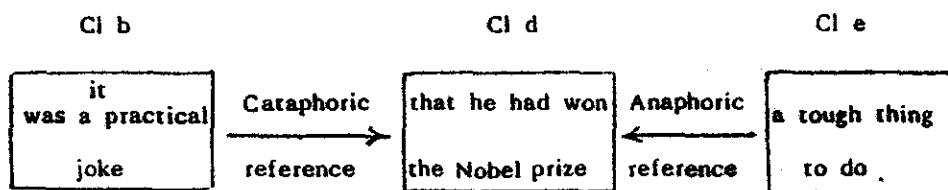
Q : In what situation ?

Cl c : (When) a telephone caller from Stockholm woke him up yesterday with word that ....

As can be seen , 'in what situation' may be associated with clause C . Thus its function can be labelled Situation

### Problem

It will be seen that Cl e refers anaphorically to Cl d and characterises it retrospectively as 'a tough thing'. 'Tough' is a negative assessment which signals Cl d as evaluation of Situation as bad, i.e. Problem. 'Thing' is a lexical item which, again, marks Cl d as the part of situation requiring response, i.e. Problem. This analysis is supported by cataphoric 'it' in Cl b which anticipates 'thing' as 'a practical joke', i.e. a problematic situation. This net of clause relations can be diagrammatically shown as follows:



### Response

The initial stretch 'Donald O. Cram thought it was a practical joke' can be given the label Response on the basis that it stands in a cause-consequence relation with Cl d and may follow it :

When a telephone caller from Stockholm woke

Donald O. Cram up yesterday with word that he had won the Nobel chemistry prize, he thought it was a practical joke.

Moreover the two discourses are connectable by the paraphrasing conjunct 'therefore' which conveys the meaning of Response :

A telephone caller from Stockholm woke (Donald O. Cram ) up yesterday with word that he had won the Nobel chemistry prize, therefore he thought it was a practical joke.

Another feature which helps signal this stretch as Response is that it answers the test question : 'What response has he made ?' thus ;

- A telephone caller from Stockholm woke (Donald O. Cram) up yesterday with word that he had won the Nobel chemistry prize .

Q : What response has he made ?

- He thought it was a practical joke.

#### Evaluation

As clause e 'a tough thing to do ' expresses a statement of opinion, its function will tentatively be described as Evaluation. The criteria on which this analysis is based are as follows :

(1) The clause answers the test question : 'what is your evaluation of this ? ' :

-Donald O. Cram ...won the Nobel chemistry prize

Q : What is your evaluation of this?

- A tough thing to do ...

(2) The evaluative item ' tough' is expressive of assessment.

(3) It is possible to substitute the problem element d for 'thing', member of the evaluation element as in the following paraphrase :

-It is tough to do (i.e. win) the Nobel chemistry prize when you make a living cleaning carpets.

No other element in the text may be substituted for ' thing'.

This reinforces the analysis of ' thing ' as belonging with d as a single element of the discourse organization.

#### Basis for Evaluation

Clause f, 'when you make a living cleaning carpets' , is regarded as

Basis for the Evaluation in Cl e for the following reasons:

(1) It answers the question : 'What makes you say that?':

-A tough thing to do ...

Q: What makes you say that ?

- (Donald O. Cram ) makes a living cleaning carpets.

- (2) Noteworthy is the change in clauses e and f into the factual Indicative form of the verb. The change indicates that the facts described in the epitome, though expressed through past predicators, now have consequences for the present. This is reinforced by the change of agent from 'Donald O. Cram' into 'you', i.e. any person :

It is tough to do the Nobel prize when you make a living cleaning carpets.

- (3) The validity of this point could be attested if we substitute conditional 'if' for temporal 'when' and permute clauses e and f thus:  
\*If you make a living cleaning carpets (it is ) a tough thing to do the Nobel prize \*. In this real condition the two clauses are truth-neutral (cf. Leech, 1971, 110). Being truth-neutral is a characteristic of Basis (cf. Hoë, 1983, 79).

#### B. The Detail member

Details in the Detail member (sentences 2-7) are given in respect of Situation, Problem and Response. It is noteworthy that the main cohesive feature which interrelates the two members of the discourse is Repetition (a term here used to subsume simple and complex repetition, substitution, ellipsis and paraphrase). Much of the information is now repeated but in the form of a first hand conversation over the telephone as experienced by Donald O. Cram himself. This repetition, as will be seen subsequently, is functional as it forms a framework for the interpretation of the new material.

##### Sentences 2-7

(2) In a very thick accent, he said: 'It's my pleasure to announce that you have won the Nobel prize.' (3) And I went along with it and said: 'In what field?' (4) And he said: 'In chemistry, said Cram.' (5) I thought it was a practical joke so I said: 'That's great, and hung up.' (6) But then the Royal Swedish Academy of Science called back and explained what the prize was for. (7) Cram, owner of a carpet servicing business, realised he must mean Professor Donald J. Cram of the University of California.



**Analysis and justification**

A relation of Matching compatibility (where the parts are matched for similarity) holds between sentence 1 (the Epitome ) and sentences 2-5 (of the Detail). The lexical clue to this relation is systematic partial Repetition. The matching sentences are set out in the following Table:

	Situation	Problem	Response
Epitome 1c	<u>a telephone caller</u> from stockholm woke him up yesterday with word	d <u>that he had won</u> <u>the Nobel chem.</u> <u>istry prize</u>	b <u>Cram thought it</u> <u>was a practical</u> <u>joke</u>
Detail 2a	In a very thick accent <u>he said :</u>	2b 'It's my pleasure (5) <u>I thought it was</u> <u>to announce that</u> <u>you have won the</u> <u>Nobel prize.</u> ' (3) And I went along with it and said 'In what <u>field</u> ' (4) And he said: 'In <u>Chemistry</u> .'	<u>was a practical</u> <u>joke so I said</u> <u>'That's great,</u> <u>and hung up."</u>
	repetition	repetition	repetition

The types of connection between the two compatible parts of the discourse are :

**Simple Repetition :**

Straightforward repetition is obvious as whole clauses (in Problem and Response) are repeated with no more alteration than is explicable by reference to grammatical paradigms ('he had won', 'you have won', etc.)

### Substitution

Personal pronouns in the Detail are used anaphorically to refer to subject noun phrases in sentence 1, e.g.

'a telephone caller' 1c ← 'he' 2a  
'Donald O. Cram' 1a ← 'he' 1d  
← 'you' 2b (addressee)  
← 'I' 3,5 (speaker)

### Paraphrase

As 'chemistry' may be paraphrased to include 'field' in (a field of science), 'field' (sentence 3) may be taken as a paraphrase of 'chemistry' (sentence 4).

### Other points of analysis :

This repetition is not superfluous as it functions to

- (i) enliven the discourse by providing the reader with first hand knowledge ;
- (ii) sharpen the mockery of the coincidence (in the eventual realization that it was not Cram the carpet cleaner but Cram the professor that won the Nobel prize) ;
- (iii) provide a frame for the interpretation of the new material in sentence 7.

The moment of illumination in (7) is presented against a background of joking uncertainty on the part of the carpet servicing man. The final effect of sentence 7 is recognised and its importance to the context is assessed through the Detail member of the discourse.

## 4.2 The Evidence-Justification Pattern

Three discourses<sup>(5)</sup> of the corpus point to another pattern which is used to organize texts in English. Each of them begins with a situation or claim that is immediately followed by its evidence in the form of a representative case, sign or symbol. The evidence is argued and the claim/situation justified in the rest of the discourse.

The Evidence - Justification pattern occurs whenever a text can be projected into dialogue in such a way as to include the interpreter's request : Give an evidence to prove the claimed situation/ your claim. The following table shows how the aforementioned texts satisfy this requirement:

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Situation /claim	Evidence
ET5 The new spirit of enterprise in Britain.	Companies keeping up production during the summer instead of shutting down
ET6 Stars are not made by voices alone.	The case of Paul Johnson.
ET7 The recent fascination with domestic interiors (in England).	The intense media interest generated this week by the contents of Wiltshire house.

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In the following analysis exemplification is mainly given from ET5.

ET5-(A self-contained passage from a larger article)

Real test ahead over booming orders

(1) a There can be no better symbol of (b) the new spirit of enterprise in Britain than (c) evidence of companies keeping up production during the summer, instead of shutting down and allowing workers to depart en masse for the Costa del Sol.

(2) a Normally, say government statisticians, output falls by as much as 14 p.c. during July and August (b) but this year it fell less as companies responded to the challenge presented by booming order books. (3) As a result, manufacturing output in the three months to August was 6p.c. higher than a year earlier.

(4) The real test of industry's ability to meet booming demand without bumping up against production ceilings has yet to come. (5) a It is one thing to boost output during the normally slack summer months, b quite another to achieve the same increase when factories are back to normal.

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The above discourse can be analysed as :

- Situation : 1b
- Evidence : 1c
- Justification : 2 and 3
- Evaluation of Evidence : 4
- Basis for Evaluation : 5

**A. Analysis of Situation**

It is plausible to establish the NP 'the new spirit of enterprise in Britain' ( 1b ) as situation for it answers the question : 'What is there (i.e. the situation) in Britain at the moment ?' :

Q : What is there in Britain at the moment ?

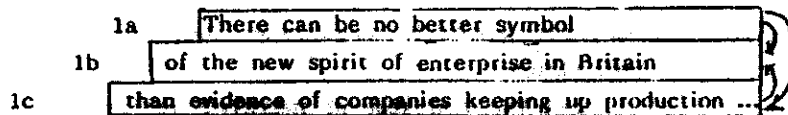
1b: (There is) the new spirit of enterprise .

It should be noted that 1b derives its sequential meaning not from its immediate proximity to preceding (1a) or following (1c), 'There can be no better symbol... than evidence of companies ...', but from its function as situation in the overall pattern of the discourse. Thus , while (1a) and (1c) are connected by 'better than ', they are connectable to 1(b) by explicit connectors of the type :

Q : what is the symbol evidence of ?

Q : what is the evidence significant of ?

Only 1b - and not any other element in the discourse - can answer these questions as the symbol and evidence are signals of the functions of 'the new spirit of enterprise in Britain'. Sentence 1 can therefore be represented diagrammatically as in the following Figure :



**B Analysis of Evidence**

The use of the comparative phrase 'better symbol ...than' in 1a anticipates 1c as Evidence and serves as a preview to the details in 1c. The Detail member in 1c is introduced by the lexical item 'evidence ' which explicitly signals

the function of what follows ('companies keeping up production during summer , instead of shutting down...') as Evidence of the situation in 1b.

**C Analysis of Justification**

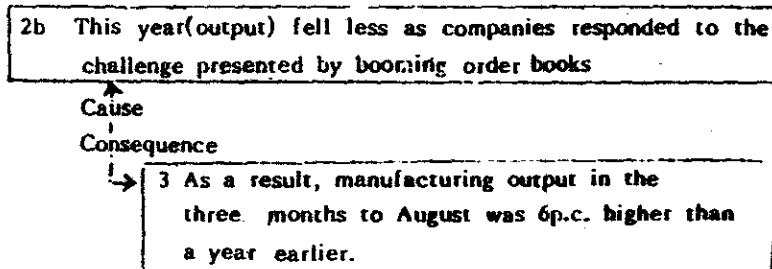
The linguistic function of sentences 2 and 3 can be established as Justification for the following reasons

- (i) They answer the typical test question : 'Can you justify your claim ? ' :

Q : Can you justify the claim that 'keeping up production during the summer , instead of shutting down ... ' is a symbol of the new spirit of enterprise in Britain ?

2,3 : 'Normally , say government statisticians , output falls ... during July and August but this year it fell less as companies responded to the challenge presented by booming order books. As a result , manufacturing output : in the three months to August was 6 p.c. higher than a year earlier.'

- (ii) The required justification is also produced by the pejorative-meliorative contrast between 2a and 2 b. The attitudinal item 'normally' in 2a signifies the expected 'usual ' which is pejorative or negative as signalled by 'falls' in 'output falls.' The conjunct 'but 'in 2b indicates the change to the positive or meliorative signalled by the lexical expression 'fell less'. Thus Justification is realized by way of Evaluation.
- (iii) The Cause-Consequence relationship that holds between the two sentences supports Justification as the linguistic function of the two sentences as shown by the following Figure :



As can be seen, this relation is triggered off by the signalling vocabulary item 'as a result'in 3,i.e. the Consequence member.

D Evaluation of Evidence and Basis

Sentence 4 is Evaluation of the Evidence contained in 1c. The lexical realization which supports this claim is the use of the evaluative items 'test' and 'ability'. Sentence 5 provides the Basis for sentence 4 's Evaluation as it answers the question 'What makes you say that?' and contains some of the special vocabulary of Basis , namely 'normal,'achieve' and 'boost'.

Other points of analysis

The two parts of sentence 5 are matched lexically for contrast, grammatically for similarity. The matching Contrast is signalled by the lexical contrastive group 'It is one thing to ...,quite another to...'. As a test of this relationship the contrastive conjunct 'however' can be inserted between the two parts of the sentence (with some adjustment) as follows :

"It is one thing to boost output during the normally slack summer months,however (it is) quite another (thing) to achieve the same increase when factories are back to normal."

The Matching compatibility is conveyed by syntactic repetition (i.e. by the retention of the same grammatical shape for each half) as represented in the following Table :

5a	It is one thing	to boost output	during the normally slack summer months
5b	(It is)quite another (thing)	to achieve the same increase	when factories are back to normal
<u>Constants:</u>	It V be MN	Vinf N	Adv P/CL
	( ) mark ellipsis , M modifier , N noun ,		
	Vinf the infinitive , p phrase , Vbe Be , Cl clause)		

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#### 4.3 The Query - Evidence Pattern

More often than not, the general public tend to take certain things as unquestionably valid. Hence writers often find it necessary to question the authenticity of what the public take for granted to shake their confidence prior to establishing a new point of view. English Texts 8,9 and 10<sup>(6)</sup> are organized in such a way as to serve this goal. The reader is helped by a discourse organization that will take him from doubt into assurance via Evidence and confirmation.

The term Query is used here to denote the member in this pattern of organization whose function is to question the validity of an idea. It is usually created in the opening sentence of the discourse, supported more often than not by a quotation from an authority (as in E.T.8), an account of an experience (E.T.9) or the use of a rhetorical question (E.T.10). The Query is immediately followed by Evidence of the new truth in the form of e.g. an actual fact, an incident, or an example, as shown in the following Table based on the above mentioned texts:

Query	Evidence
<u>Authority on the subject</u>	<u>Actual happening</u>
ET8"prof. Sir peter Medawar...once wrote of space exploration : 'like Cathedrals, it is economically pointless, a shocking waste of public money, but like Cathedrals, it is also symbol of aspirations towards higher things."	"The row over Britain's future in the European space Agency which came to a head this week...reflects a number of dilemmas facing the government and the scientific community."

Personal experience

ET9 "Only a few minutes into the performance of the Hypochondriac, a translation...of Moliere's 'le Malade Imaginaire'...I found myself wondering whether the late Hans Keller had included theatre directors in his celebrated list of unnecessary professions.

Rhetorical question

ET10 "Are politicians really rude to one another?"

Fact

"What caused me to brood on this was the fact that while Nancy Meckler who directed the play, had chosen to move its action forward to the present day ...she had carelessly forgotten...to update the translation as well. "

Incident

"Mr Mulroney , the Canadian prime Minister, has complained of Mrs Thatcher's impoliteness to him ..."

It is worth noting that this pattern is different from the Generalisation -Example pattern described by Hoe(1983,134). In Hoe's pattern a generalisation is established and exemplified while in the present pattern a generalisation is, in fact, abolished through doubt and replaced by a new standpoint. Thus ,e.g., to the implied generalisation that space exploration is a wonderful scientific achievement there is the query : Isn't it economically pointless, a shocking waste of public money ? (see ET 8, Appendix ).

Further ,while the Generalisation-Example relation occurs whenever a text can be projected into dialogue in such a way as to include the reader's request ' give me an example or examples',

a Query-Evidence relation occurs whenever a discourse can be projected into dialogue using the request 'Provide an evidence of the questionable point of view /Query'. Evidence (followed by confirmation) is a necessary member of the present relation.

**Analysis of Discourse 8**

ET 8 is subsequently presented and analysed as an example of the Query - Evidence pattern.



A message to science from outer space

1a Professor Sir Peter Medawar, the great scientist and humanist who died earlier this month, once wrote of space exploration: "b like cathedrals, it is economically pointless, a shocking waste of public money, (c) but like cathedrals, it is also a symbol of aspirations towards higher things." (2) His words apply not only to space, but to scientific research more generally. (3) The row over Britain's future in the European Space Agency, (b) which came to a head this week at the gloomy Astronautical Federation Congress in Brighton, reflects a number of dilemmas facing the Government and the scientific community.

4a How much effort should be devoted to fundamental research, (b) and how much to more commercially promising work? (5) How much should be funded by industry, (d) and how much from the public purse? (6) How do we assess priorities? (7) What proportion of our national effort should be pursued internationally, and especially in Europe? (8) And how should we distribute funds between our universities and research establishments?

(9) In fact, very little of the British National Space Corporation's claim for a threefold increase in its funding - from £116 million to £300 million - was destined for "cathedral building" in Medawar's sense. (10) Only a small part was to go, for instance, to astronomy.

The above passage can be analysed as :

Query : 1

Evaluation of Query : 2

Basis for Evaluation : 3

Evidence : 3

(Inner pattern, a Generalization - Example relation : 3-8)

Final confirmation : 9,10

(A) The Query : Sentence 1

The Query member will usually contain a clue that it is part of a relation with a subsequent Evidence - confirmation members. As we have seen in the Table, p , this may be realized in the form of a lexical sign (e.g. 'I wonder 'really?', an evaluative term (e.g. 'shocking 'surprising', etc.) or , as in this discourse (sentence 1) , a quotation that demands that an Evidence must follow.

It is also noteworthy that the two clauses of the quotation stretch in sentence 1 are matched for contrast. The Matching relation is signalled by the contrastive conjunct 'but', syntactic parallelism , repetition and replacement. The existence of the Matching relation could be demonstrated by the following Table :

syntactic repetition	1b	like cathedrals	it is economically pointless, a shocking waste of public money
	1c	but like cathedrals	it is also a symbol of aspirations towards higher things
		↓                    ↓	
		contrast    repetition	replacement

Other points of analysis

As can be seen , the quotation is a scientist's response to 'space exploration', signalled in (1b) as a Problem through negative lexical items (namely, 'pointless', 'shocking', and 'waste') that are indicative of a problem. 'Space exploration' is like 'cathedral building' in its contrastive aspects: as a waste of public money and as a symbol of aspirations towards higher things.

'But' in (1c) denotes the contrastive aspects of cathedrals , thus of space exploration'. Lexical repetition highlights the new information contained in clause c. Syntactic repetition (i.e. retention of the same grammatical shape for each clause (cf. 4.2, D)) functions to connect the two clauses in such a way as to reveal similarities and differences.

**B Evaluation accompanied by Basis: 2,3**

Evaluation here takes the form of Evaluation accompanied by Basis for Evaluation, with sentence 3 providing the Basis for sentence 2's Evaluation.

To establish sentence 2 as Evaluation one of the questions that seeks to elicit an opinion could be asked:

Q: What is the writer's evaluation of prof. Medawar's response?  
S2: "[He says that the prof.'s] words apply not only to space, but to scientific research more generally."

Sentence 3 is regarded as Basis for the Evaluation in sentence 2 on the grounds that:

- (i) it answers the test question: 'What makes you say that?' as in the following dialogue:  
S2: "His words apply ...to scientific research more generally"  
Q: What makes you say that?  
S3: "The row over Britain's future in the European Space Agency ...";
- (ii) it uses in its main clause (i.e. 'the row reflects a number of dilemmas ...') a typical Basis predicator (the simple present) that indicates that the facts described, though taking place in the past, are relevant to the present. As Leech (1971,1) has explained, the simple present employing a state verb (e.g., 'reflects') places no limitation on the extension of the state into past and future time in its unrestricted use.

**C Evidence: 3**

Evidence as another discourse functional relation holding between sentence 3 and the opening sentence can be established on the following grounds:

- (i) The lexical items 'row' and 'dilemmas'(3a) and 'gloomy' (3b) create a negative situation, i.e. Problem, anticipated in the opening sentence by the lexical signals 'economically pointless' and 'shocking waste'.

- (ii) The Problem in sentence 3 provides the Evidence needed to support the Query's viewpoint about space exploration'. Hence sentence 3 can be elicited by the test request 'provide an evidence to support your query ':

S1 : "Space exploration...economically pointless a shocking waste of public money ".

Q : Provide an evidence to support your query !

S3: "(The evidence is) the row over Britain's future in the European space Agency , which came to a head this week at the gloomy Astronautical Federation Congress in Brighton ...".

#### The inner pattern

#### D Generalisation-Example relation : Sentences 3-8

Several factors lead to the analysis of sentences 3-8 as organised by a Generalisation-Example relation forming a pattern within the general Query-Evidence pattern.

First, there is the signalling phrase in sentence 3, 'a number of dilemmas,' which demands Example to follow. Secondly , sentence 3 and the subsequent paragraph can be converted into dialogue using the reader's request 'Give me an example or examples' thus:

Gen.S3: 'The row over Britain's future ... reflects a number of dilemmas facing the government and the scientific community.'

Q : Give me some examples.

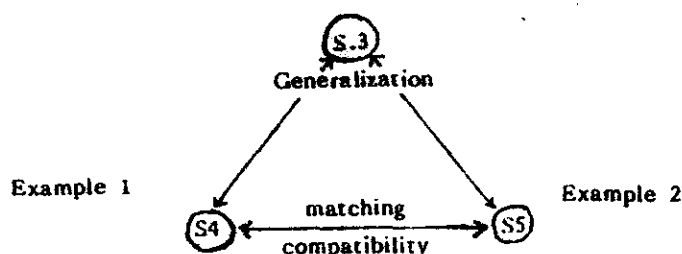
Exx 4-8: "(For example, there is the dilemma of deciding) how much effort should be devoted to fundamental research , and how much to more commercially promising work ..."(to the end of S8).(Paraphrase between brackets added )

Another test of this relation is the ability to insert between S3 and S4 the conjunct 'for example' or 'for instance' as can be seen in the above paraphrase.

It is noteworthy that clauses 4a and 4b, 5c and 5d of the Example member can be shown to be in a Matching compatibility relation through repetition, ellipsis, replacement and grammatical and lexical parallelism as demonstrated by the following Table :

Grammatical parallelism	
S3	S4
c	a
how much	How much effort
d	b
and how much	and how much (effort)
Repetition	( )
	should be devoted to
(	(
Ellipsis	) to
(bracketed)	fundamental research
	more commercially promising work
	Industry
	the public purse
Replacement	

The interlocking of the Generalization-Example relation and Matching compatibility could be represented by the following diagram :



**E Final confirmation:9 and 10**

Sentences 9 and 10 are signalled as confirmation of sentence 1 (the Query member) as they provide a positive response on the part of the BNSC to reduce 'Cathedral building 'in Medawar's sense of wasting public money. This function can be established by asking the test question:"What response has been made to avoid'cathedral building 'in Medawar's sense?"as follows:

Query s1:"Space exploration (is) like cathedral building, it is economically pointless, a shocking waste of public money."

Q: What response has been made to avoid 'cathedral building 'in that sense?

S9,10 : "In fact,very little of the BNSC's claim for a threefold increase in its funding ...was destined for 'cathedral building 'in Medawar's sense . Only a small part was to go ,for instance , to astronomy ."

Subordination can be employed to reveal the semantic cohesion between the opening sentence and final confirmation in 9 and 10. In the following paraphrase the three sentences (1,9,10) are brought together by subordinating clauses 1b and 9 to the main clause in 10 :

"(By) destining very little of the RNSC's funding to 'cathedral building' (which) is economically pointless, a shocking waste of public money, only a small part (of its claim for a threefold increase) was to go, for instance, to astronomy."

#### Notes

- (1) Arabic discourse is similarly investigated in 'Arabic discourse can be equally scientific': an experiment in discourse analysis' which appeared in this volume.
  - (2) For our purpose, any stretch of written (or spoken) language (larger than a sentence) that is felt to be complete in itself is discourse. (see Crystal, 1985, 96).
  - (3) By 'discourse organization' we mean the total set of relations that exist within a discourse.
  - (4) Text 1 : "Nobel prize is almost swept under carpet," by John Pine of Reuters .  
Text 2 : "Underwear back underground," by Anthony Hopkins .  
Text 3 : "Inspiration and hope in Hungary," by Minette Marrin  
Text 4 : "Test for food irradiation not available," by Godfrey Brown
  - (5) Text 5 : "Real test ahead over booming orders," City Comment .  
Text 6 : "King of the blues" by Bruce Dessau .  
Text 7 : "Sotheby's defectors go for the lot," by Hugo Daveaport.
  - (6) Text 8 : "A message to science from outerspace," by George Walden, MP.  
Text 9 : "A drama on the sick-bed," by Charles Osborne.  
Text 10 : "The art of saying it with glowers," by Julian Critchley, MP.
-

## 4 Test for food irradiation not available

By Godfrey Brown  
Agriculture Correspondent

What was likely to emerge were specific radiation detection methods for specific foods, he said. "You will not have a 'dipstick' test for a very long time, if ever, which says 'this food has been irradiated,'" he added.

Prof McMurray believes irradiation has a lot going for it. "I can see no reason why the Government should not give it the go-ahead," he said.

"There is enormous public misunderstanding about irradiation: it is not radiation and is no more dangerous than using a microwave."

The cobalt-fueled, gamma-b irradiator at the centre is housed in a separate, reinforced concrete bunker with walls 5 ft thick.

THERE IS no simple test available to prove whether food has been irradiated to kill off bacteria and prolong shelf-life, scientists at Britain's only official food irradiation research station, in Belfast, said yesterday.

The Government is expected to announce its decision shortly on whether to allow the irradiation of food, banned since 1964 except in the preparation of sterile diets for hospital patients.

Food irradiation is allowed in about 30 countries, including Holland, Israel, Japan and South Africa. An advisory committee on irradiated and novel foods reported last year that it was "an effective food preservation treatment that would not prejudice the safety and wholesomeness of the food."

But it remains a controversial process, and consumer organisations are opposing its introduction, at least until a fool-proof labelling system can be developed.

### 'Much misunderstanding'

Prof Cecil McMurray, deputy chief scientist in the Northern Ireland Department of Agriculture, admitted yesterday that no irradiation test existed although the department's Agricultural and Food Science Centre in Belfast, which he runs, was trying to develop one.

## 2 Underwear back under ground

By Anthony Hopkins

WOMEN in corsets, brassieres and knickers have been reappearing in those celebrated escalator advertisements on the Underground without even the London Transport authorities realising it.

The posters were an galvanising part of every male Underground traveller's journey in the 'sixties before feminist fervour secured their removal.

"We suspect the advertisements have been speaking back in, although our official view is that the same kind of thing has been appearing all along," said a London Transport spokesman.

"But what can you do with a pair of legs in an advertisement for stockings if you do not show the actual legs themselves?"

### Not offensive

"We know that some of the advertisements have appeared at Oxford Circus and we are equally certain that they are not offensive. Everybody has legs and most people wear underwear, don't they?"

What London Transport did not say is that underwear advertisements have been reappearing without the "this degrades women" stickers and slogans of several years ago, when "anti-sexist" activity centred around the now abolished Greater London Council was at its height.

TELEVISION

3 Minette Marrin

## Inspiration and hope in Hungary

To Hungary with Love (BBC-1) was a moving film about the Peto Institute in Hungary, which has developed a new technique of educating children with brain damage. Last time a film was shown about this place, the BBC received 11,000 letters, questions were raised in the House of Commons and desperate parents set up a pressure group to have this kind of special education provided here.

Meanwhile, 150 parents who can find no suitable help for their children in this country, have uprooted themselves and moved, at great cost, to Hungary for a place in the Peto Institute.

There was something rather inspirational about the shots of the children in Hungary, each patiently helped and instructed by a pretty and dedicated young woman, as they struggled to master their own bodies and their handicaps. There can be no doubt of the sincerity of all involved, and it was clear that the children were making progress, however painfully slow.

The parents felt that it was "absolutely criminal" that "nothing is being done in England", and that this treatment — "Conductive Education" — should be offered to all who need it. On the evidence of the film, it is hard to disagree. However, there was no attempt at critical evaluation; we did not learn what reputable British doctors think of it all.

## Nobel prize is almost swept under carpet

By John Pine of Reuters  
in Los Angeles

DONALD O. CRAM thought it was a practical joke when a telephone caller from Stockholm woke him up yesterday with word that he had won the Nobel chemistry prize, a tough thing to do when you make a living cleaning carpets.

In a very thick accent, he said: "It's my pleasure to announce that you have won the Nobel Prize." And I went along with it and said: "In what field?" And he said: "In chemistry," said Cram.

I thought it was a practical joke so I said: "That's great, and hung up." But then the Royal Swedish Academy of Sciences called back and explained what the prize was for. Cram, owner of a carpet servicing business, realised he must mean Professor Donald J. Cram of the University of California.

Professor Cram, 68, eventually learned that he shared the \$226,000 prize.



# Real test ahead over booming orders

THERE can be no better symbol of the new spirit of enterprise in Britain than evidence of companies keeping up production during the summer, instead of shutting down and allowing workers to depart en masse for the Costa del Sol.

Normally, say Government statisticians, output falls by as much as 14 p.c. during July and August but this year it fell less as companies responded to the challenge presented by booming order books. As a result, manufacturing output in the three months to August was 6 p.c. higher than a year earlier.

The real test of industry's ability to meet booming demand without bumping up against production ceilings has yet to come. It is one thing to boost output during the normally slack summer months, quite another to achieve the same increase when factories are back to normal.

Government statisticians take a predictably cautious view. They believe the underlying rate of growth in manufacturing output is just 5.5 p.c., not 6 p.c. or more. But the last time British companies achieved that was during the Barber boom. Hopefully, that is the only similarity between then and now.

Treasury economists believe that Britain cannot keep on growing this fast without eventually hitting a brick wall. For the moment, though, they are not particularly worried, although few can miss the fact that earnings in manufacturing are rising even faster than they were, by 8.25 p.c. a year against 7.75 p.c. a few months ago.



# Sotheby's defectors go for the lot

## 6 King of the blues

IF STARS were made by voices alone, Paul Johnson would be up there with Terence Trent D'Arby as one of the discoveries of 1967. Sharing the same record label (CBS) as Johnson, D'Arby has benefited from the promotional muscle that goes with someone who blends an adequate voice with the dance steps of James Brown and the androgyny of Prince. As a result Johnson, who has an exquisite, almost ethereal delivery, has been somewhat overlooked.

Supporting B. B. King at the Albert Hall, he acquitted himself admirably, savouring the taste of a stardom that may never be wholly his. Like the greatest of American-soul singers, the London-born Johnson cut his teeth singing gospel, and much of his current material exudes an almost religious conviction. "Half A World Away" for instance, is a plaintive, swaying anthem, bolstered by Johnson's molten falsetto.

B. B. King gives the impres-

sion that old bluesmen never die, they just loosen their belts. In recent years, King's girth seems to have expanded to match his reputation as king of the blues and, during his magisterial guitar solos, his smile seemed almost as broad.

King still subscribes to the homespun philosophy of "If it ain't broke, don't fix it" and, after 40 years on the road, he is still cradling the guitar that he christened Lucille and delivering the most basic of rock and roll's antecedents.

But the best thing about a B. B. King performance these days is that it really is a performance. Decades of live work have made him a showman par excellence and he is backed by a superb seven-piece band. King sings of sexual betrayal, bitterness and the plight of the working man but, when he wants to, he certainly knows how to raise a smile.

Bruce Dessau

OTHER people's houses have long preoccupied the home-loving English, but the fascination with domestic interiors and the minutiae of material comfort has recently reached a pitch not far short of obsession. One sign is the intense media interest generated this week by the contents of a Wiltshire house once owned by the flamboyantly eccentric Stephen Tennant.

The most obvious reflection of the phenomenon among the public is what might be termed cupboard lust—a fever to acquire the sort of furniture, pictures and ornaments which add polish to the home and lend lustre to its owner. Business is booming in the antiques trade.

Not everyone, however, can afford the prices reached in the big auction houses. Some of the finest stuff has already been plundered by dealers and sold abroad. And when a choice item resurfaces the London market these days, it frequently fetches a sum which can make even the well-heeled start looking for a shoe-repair shop.

Somewhere between Sotheby's and the salerooms that specialise in clapped-out cookers and fridges, a gap has opened in the market. Auction rooms selling antiques too lowly to shake the professional haunter of major dealers are thriving around the country.

In 10 days' time, a new auction house, set up by two enterprising young defectors from

Sotheby's Chester office and trading under the name Rosebery's, opens its doors for its first monthly sale. It will be the 13th small auction house in Greater London, though neither Phillip Knapper nor Ian Cadzow seems unduly perturbed by any superstitious implications.

They will be operating out of premises near Sadler's Wells Theatre. The building is leased by Bloomsbury Book Auctions, which was itself the child of an earlier and more acrimonious defection from Sotheby's. Lord John Kerr, a Dickensian figure with white sideburns and a penchant for snuff, and Frank Herrmann, author of Sotheby's official history, will also sit on the Rosebery's board.

"A lot of people seem to think we're being very brave to do this," says Phillip Knapper. "We think we're being moderately brave," says Ian Cadzow.

In fact, Rosebery's is based on some fairly shrewd calculations. Tempting though it is to see the new business as a rather perky mouse challenging the multinational elephant of Sotheby's, Rosebery's owes its raison d'être to a policy, common to all the grander auction houses, which Cadzow and Knapper believe turns away much eminently saleable material at the cheaper end of the market.

A boom is under way in middle-market auction rooms. HUGO DAVENPORT previews the latest

# A message from

**P**ROFESSOR Sir Peter Medawar, the great scientist and humanist who died earlier this month, once wrote of space exploration: "Like cathedrals, it is economically pointless, a shocking waste of public money; but like cathedrals, it is also a symbol of aspirations towards higher things."

His words apply not only to space, but to scientific research more generally. The row over Britain's future in the European Space Agency, which came to a head this week at the gloomy Astronomical Federation Congress in Brighton, reflects a number of dilemmas facing the Government and the scientific community.

How much effort should be devoted to fundamental research, and how much to more commercially promising work? How much should be funded by industry, and how much from the public purse? How do we assess priorities? What proportion of our national effort should be pursued internationally, and especially in Europe? And how should we distribute funds between our universities and research establishments?

In fact, very little of the British National Space Corporation's claim for a threefold increase in its funding — from £118 million to £300 million — was destined for "cathedral building" in Medawar's sense. Only a small part was to go, for instance, to astronomy.

ONLY A few minutes into the performance of *The Hypochondriac*, a translation by Alan Drury of Molière's "Le Malade Imaginaire" at the Lyric, Hammersmith, I found myself wondering whether the late Hans Keller had included theatre directors in his celebrated list of unnecessary professions.

What caused me to brood on this was the fact that, while Nancy Mackler, who directed the play, had chosen to move its action forward to the present day, showing us at the risk of the curst the hypochondriac Argan in bed, checking his doctor's bills with the aid of a computer visual display unit, keyboard and printer, she had curiously forgotten, or had not bothered, to update the translation as well.

One found oneself, throughout the play, looking at people dressed in modern clothes, the members of the medical profession in pin-stripe suits and the youngsters in various forms of modified punk gear, while they talk of apothecaries, notaries, blood-letting and other forms of treatment long outmoded, utter lines like "But soft, someone calls" or "I am your servant, sir", and mount a family entertainment on the subject of shepherds and shepherdesses.

Alan Drury's occasionally archaic translation is perfectly acceptable, but only if uttered by characters dressed in costumes of the 17th century. Molière's final comedy, in which he himself played the title role, collapsing on stage and dying after the fourth performance, is equally acceptable in another matter. His satire on hypochondria, gullibility and the medical profession is broader than it is deep, its plot is childishly simple, and its final scene, a ballet with interpolated Latin doggerel parody-

THEATRE

## A drama on the sick-bed

## The art of saying it with glowers

By Julian Critchley

ARE politicians really rude to one another? Mr Mulroney, the Canadian Prime Minister, has complained of Mrs Thatcher's impoliteness to him, although the ways and wherefores seem unconvincing. Something, I gather, about statistics. Mrs Thatcher no doubt had the last word. She was later presented by an admirer with a "talking stick", a Red Indian device, the possession of which gives the recipient the floor.

I never thought irony to be a North American failing.

The answer to my rhetorical question must be that politicians are rude in public only to politicians of parties other than their own. We are very rude indeed about our own side, but only in private. Public rudeness ought to be spiced with wit, but wit is, like all commodities, in short supply. All too often we substitute common abuse and hope to get away with it.

Lloyd George was a skilled insulter, memorably of Neville Chamberlain, who he said would have made a good Lord Mayor of Birmingham in a bad year and saw foreign affairs through the perspective of a municipal drainpipe.

Harold Macmillan was rude but never less than elegantly so. His gibe against Harold Wilson in 1963, at a time when newspaper coverage about the poverty of the Leader of the Opposition's early life in Huddersfield had become excessive — to the effect that if the Rt Hon Member went to school without boots it was because he was too big for them — brought the House down.

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