

Theme as Constraining Force

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Abstract

This paper is centred on the notions of theme and rheme as a resource for the organisation of the clause as message. It takes, as its starting point, Halliday's (1994) conception of theme as a clause-initial element and an anchor in the realm of experience. Viewed this way, the thematic segment of the clause minimally requires the presence of an experiential component, without which the clausal message cannot properly take off (Halliday, 1994: 53). From a message-development perspective, however, we may also view theme as a constraining force on the development of the message. This places explicit focus on the fundamentals of the theme-rheme notions – that they organise the clause as a message – and draws our attention to various cognitive psychological considerations. An alternative model which complements, rather than competes against, the Hallidayan framework is proposed in this paper. Termed the inference-boundary (IB) model – this model holds that theme is a clause-initial element that is capable of generating a boundary of acceptability within which it is permissible for the rheme to occur. Underlying the IB model is the principle of acceptable message development, which serves as a simple procedure to delimit the thematic segment of the clause.

0. Introduction

This paper is concerned with the message structure of the English clause. It presents a reinterpretation of the functions of theme and rheme in the shaping of the message within the clause. Based on the Hallidayan fundamentals of theme as a clause-initial element, it approaches the thematic structure of the clause from a message-development, rather than a metafunctional, standpoint. This leads us to view theme as a constraining force in the development of the clausal message, providing an alternative understanding of the way messages are organised within the clause.

An alternative model of theme and rheme – the inference-boundary (IB) model – is outlined as a complementary model to the Hallidayan framework (Leong, 2000a). Based on schema theory and the role of inferences in language processing, the IB model holds that theme is the clause-initial segment that is capable of generating a boundary of acceptability, within which it is permissible for the rheme to occur. Underlying the model is a principle that holds for all well-formed clauses. Termed the principle of acceptable message development (AMD), this states that the theme of the clause must be acceptably developed by the rheme. As I hope to show in this paper, it is through the deliberate flouting of the AMD principle that theme can be delimited in an intuitively appealing way.

1. Historical Overview

The notions of theme and rheme may be attributed to the work of Henri Weil who, in 1844, made the following observation:

There is [...] a point of departure, an initial notion which is equally present to him who speaks and to him who hears, which forms, as it were, the ground upon which the two intelligences meet; and another part of discourse which forms the statement (*l' énonciation*), properly so called. This division is found in almost all we say.

(Weil, 1844:29)

The ideas of Weil were followed up by the Prague circle of linguists, notably Mathesius (1928), Daneš (1970, 1974), and Firbas (1992), among many others. A feature of the Prague approach is to regard theme as the carrier of the lowest degree of communicative dynamism (CD) – an element that contributes least to the development of discourse. Such elements are typically retrievable from context and carry given information. Contextually independent elements, however, may also be thematic, provided they are foundation-laying in function. These include elements which establish the setting (time or place) of the discourse or bear some quality to be expressed by the clause (Firbas, 1996:66).

2. Hallidayan Framework

Although adopting the theme-rheme terminology of the Prague circle, Halliday departs from Firbas and others by separating the thematic structure of the clause (comprising theme and rheme) from the information structure (comprising given and new). Whereas given information is inevitably thematic in the CD approach, Halliday takes the opposite view:

[...] although they are related, Given + New and Theme + Rheme are not the same thing. The Theme is what I, the speaker choose to take as my point of departure. The Given is what you, the listener, already know about or have accessible to you.

(Halliday, 1994:299)

Halliday conceptualizes theme, instead, as a clause-initial, position-bound element, and rheme as the development of theme. Specifically, "one element in the clause is enunciated as the theme; this then combines with the remainder so that the two parts together constitute a message" (Halliday, 1994:37). In the Hallidayan framework, elements which occur in initial position are categorised as textual, interpersonal, or topical themes, as shown in Table 1.

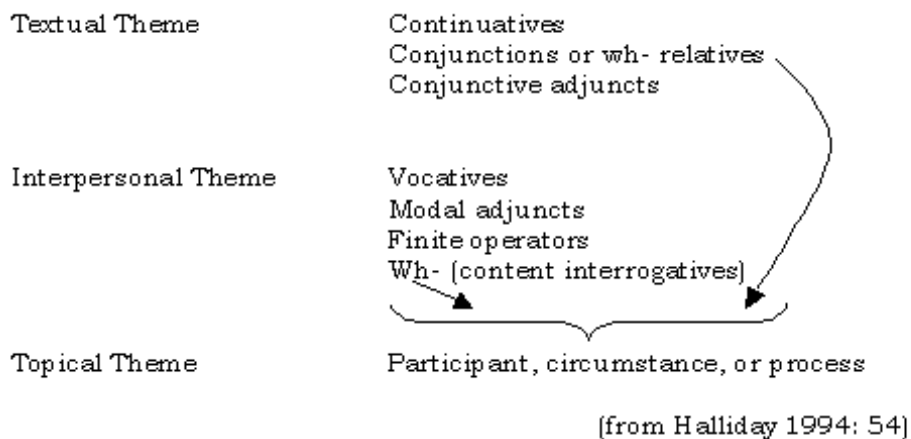


Table 1: Textual, interpersonal, and topical themes

These labels mirror Halliday's (1994) division of the major functions of language, what he terms metafunctions. These include the (a) textual metafunction, which enables language to be packaged as an integrated whole, (b) interpersonal metafunction, which enables language users to interact with each other, and (c) experiential metafunction, which enables language users to construe their experience of the world in terms of participants, processes, and circumstances.

The topical theme – the most important of the three theme types – comprises only one experiential element and ends the thematic segment of the clause. Halliday (1994:53) argues that unless this constituent appears, "the clause still lacks an anchorage in the realm of experience." The thematic segment therefore extends from the beginning of the clause up to and including the first experiential component.

The topical theme need not be preceded by textual or interpersonal themes which are optional. If all three themes do appear, however, they typically follow the textual ^ interpersonal ^ topical order, as in (1):

(1) On the other hand, perhaps
Textual Theme Interpersonal Theme
(conjunctive adjunct) (modal adjunct)

you might want to visit us next week.
Topical theme Rheme
(participant)

3. Complications

As it has never been Halliday's intention to account for the acceptability of constructions, his framework is unable to clarify whether a clause is well- or ill-formed on thematic grounds. It is possible, for instance, for a thematic analysis to be undertaken on a clause such as (2) below (assuming normal context) where "John" is the topical theme. I wish to say, however, that if unacceptable clauses are deemed to have a thematic and, therefore, message structure, it would be difficult to appreciate the functional roles of theme and rheme as a resource for organising the clause as a message.

(2) John laid an egg.

In terms of theoretical consistency, further complications are raised. In the Hallidayan framework, it is held that the topical theme is realised by the first experiential component in the clause. It

is argued that unless this is present, the clause has no anchorage in the realm of experience (Halliday, 1994:53). In practice, however, this need not always be the case. Consider (3) and (4):

- (3) Is he sad?
- (4) There is a man outside.

In (3), a choice between competing experiential components is involved. Here, although the verb "Is" is an (intensive) relational process, it is not analysed as the topical theme. Many systemicists would rather regard the verb as a finite operator functioning as an interpersonal theme, and the personal pronoun "he" as the topical theme. This, however, does not hide the fact that it is the process, rather than the participant, that appears first as the experiential component (see also comments in Fawcett, 2000:165-166). The analysis leaves unanswered why a process that is co-extensive with the finite operator is not regarded as the topical theme but is bypassed in favour of the participant. This, in turn, raises a query as to whether similar exceptions should also be made for elements in which an experiential component is fused with a textual or interpersonal component, such as *wh*-relatives in non-restrictive relative clauses and *wh*-question words in content interrogatives (see Table 1).

The situation in (4) is slightly different. Here, the empty subject "There" is analysed as the topical theme, even though it is semantically empty and, as Halliday (1994:42) himself concedes, "has no representational function" in transitivity. If so, it cannot be topically thematic since the clause technically lacks an anchorage in the realm of experience. But because it is nevertheless regarded as a topical theme, it raises a problem which is difficult to resolve on grounds of theoretical consistency (Huddleston, 1988; see also Leong, 2000b on an alternative analysis).

4. Relooking Theme

These complications underscore the need to complement Halliday's account with an additional apparatus that is able to explain why certain linguistic constructions are ill-formed or less acceptable than others in terms of the message structure of the clause. As a concept of initialness, a reasonable claim about theme is that it prepares the decoder for what is to come. Among several functions associated with initial elements, Downing (1991:129) draws attention to their role in directing decoders' expectations towards language structure and meaning, and setting the main semantic framework which will hold over the following clause or clause complex. Initial elements, therefore, work to shade in what is to come, and form expectations in this regard. If this is not fulfilled, the decoder will be forced to either revise the earlier expectation or reject the entire construction.

Approaching the theme-rheme issue from the language user's standpoint, then, recognises a multitude of factors that influence the processing of language. Very broadly, these include context and our knowledge of the world, including knowledge of pragmatic principles (knowing when to say what and to whom), conventions of language use, and language itself (phonology, syntax, semantics, etc). In their totality, these make up the cognitive environment of the language user, described as follows:

An individual's total cognitive environment is the set of all the facts that he can perceive or infer: all the facts that are manifest to him. An individual's total cognitive environment is a function of his physical environment and his cognitive abilities. It consists of not only all the facts that he is aware of, but also all the facts that he is capable of becoming aware of, in his physical environment. The individual's actual awareness of facts, i.e. the knowledge that he has acquired, of course contribute to his ability to become aware of further facts. Memorised information is a component of cognitive abilities.

(Sperber and Wilson, 1995:39)

From the language user's perspective, a useful account of the way we store and apply our knowledge of the world, whether in terms of understanding linguistic impulses or making sense of events, is schema theory, first articulated in Kant (1787) and later expanded in Bartlett (1932). The role of inferences, the activation of information derived from background knowledge or memory, is also

significant and will be addressed in the following sub-section.

4.1. Schemata and Inferences

Schema theory is a powerful account of the way we store and process our knowledge of the world, whether in terms of processing language or making sense of events. We may view a schema as "a data structure for representing generic concepts stored in memory" (Rumelhart, 1984:2). When activated, a schema provides the relevant background knowledge or context that is needed for goal-oriented action, interpretation or the generation of inferences (Hall, 1989:392-393). The following analogy of schemata as theories is particularly helpful:

Theories, once they are moderately successful, become a source of predictions about unobserved events. Not all experiments are carried out. Not all possible observations are made. Instead, we use our theories to make inferences with some confidence about these unobserved events. So it is with schemata.

(Rumelhart, 1980:38)

Here, a schema functions "as a kind of informal, private, unarticulated theory about the nature of the events, objects, or situations that we face" (Rumelhart, 1980:37). That is to say, we rely on our schemata to account for some aspect of a new experience. The processing of any incoming input, therefore, is akin to "hypothesis testing, evaluation of goodness to fit, and parameter estimation" (Rumelhart, 1980:38). Whenever a particular schema fails to account for the new experience, it is either accepted in a modified form or rejected in search for another possibility.

Broadly, the schemata that are activated during language processing may be grouped under three categories (cf. Goatly, 1997: 137):

- (a) World knowledge: an inventory of our generic knowledge of concepts, abstract or otherwise, in our long-term memory.
- (b) Knowledge of context: our awareness of the range of relevant contextual factors, including co-text, that have a direct or indirect bearing on the discourse.
- (c) Knowledge of pragmatics: our awareness of discourse strategies that are used in a communicative encounter. This knowledge of such strategies is a part of world knowledge and provides information as to why language is used in a particular way (see Seifert, 1990).

To these, we may add our knowledge of language. Since our knowledge of the world is an inventory of schemata, and language acquisition is conditioned by external factors, our language schema, comprising what we know about language, cannot be independent of this inventory but is a part of it. As it is used here, our language schema refers, narrowly, to our knowledge of the structure of language at the level of the clause (specifically, how declaratives, interrogatives, and imperatives are typically structured). We shall refer to the language schema as S1 and all other schemata (hereafter "other schemata") that come to bear on our interpretation of any clausal message as S2. In terms of consciousness, it is surmised that S1 tends to operate at a lower level than S2. There is an apparent ease by which we are able to produce and comprehend novel constructions. As Wingfield (1993:201) remarks, these are "automatic processes over which we exert little control."

When activated, schemata facilitate the generation of inferences. An inference, broadly defined, is "any piece of information that is not explicitly stated in a text" (McKoon and Ratcliff, 1992:440). This includes both transient activations of information, word-based inferences, and any information that is derived from background knowledge or memory (schemata) (van den Broek, 1994:557). In language processing, two types of inferences may be activated. The first – forward inference – tends to be non-specific in nature, unless it concerns the structural form of the clause. In this sense, forward inferences merely "refer" to the anticipation of any aspect of future events, ranging from a specific expectation that a particular event will take place to a vague sense that something will occur" (van den Broek, 1994:570). In terms of message development, on the other hand,

Forward inferences serve as anticipators for some future event or development of the present input. The second – backward inference – serves to connect two stretches of language as a coherent whole. They establish local coherence and are based on information that connects instances of the same concept, pronominal reference, and causal relations.

4.2. Inference Boundary Model

As a generator of expectations, it is proposed that a useful way of interpreting theme is to understand it as an element that determines a boundary within which it is permissible for the rheme to occur. The primary function of theme, specifically, is not simply to introduce the rheme but to do so within a frame of acceptability so that the clause makes sense only if both its theme and rheme are considered together. This model of theme and rheme – the inference-boundary (IB) model – is represented in Figure 1.

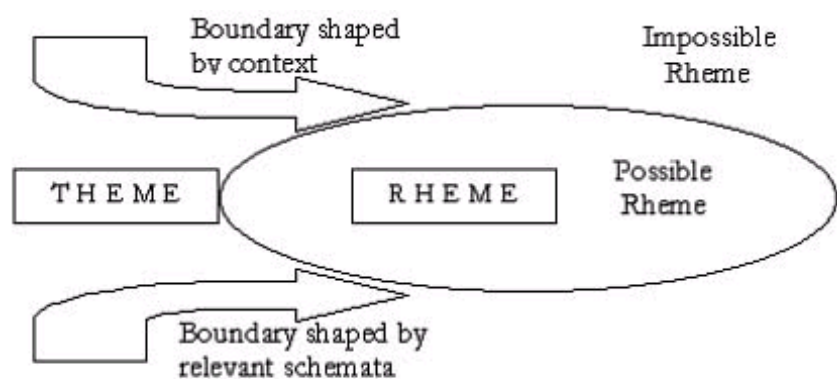


Figure 1: IB model

The ellipse in Figure 1 represents the boundary of acceptability generated by the thematic element. Of the possible rhemes within the boundary, only one is eventually selected as the actual rheme. Rhemes which fall outside the boundary are blocked from co-occurring with the theme since this would result in an unacceptable construction.

By this formulation, when a clause is processed, there is an interplay of schemata related to language and the world in general. Together with the prevailing context, these schemata establish a boundary of acceptability within which it is permissible for the rheme to occur. Since clausal (mood) structures take a predictable form, forward inferences in S1 tend to be specific. Clark and Clark (1977:68), for example, propose the following strategy for language processing: "use the first word (or major constituent) of a clause to identify the function of that clause in the current sentence."

However, since language cannot be meaningfully processed independently from S2, the interpretation of any linguistic input requires the operation of both S1 and S2 in tandem. As compared to S1, it is unlikely for specific inferences to be generated in S2 (although they are not to be precluded). Rather, in S2, we infer that the message will proceed in a constrained but non-specific way. A backward inference occurs when the decoder reaches the end of the clause to relate the rheme to the theme, establishing the appropriateness of the theme-rheme relationship. Backward inferences prompt the decoder to accept or reject constructions on the basis of this relationship and serve as a check to prevent unacceptable rhemes from surfacing. In terms of inference activation, the alternative representation of the IB model is given in Figure 2.

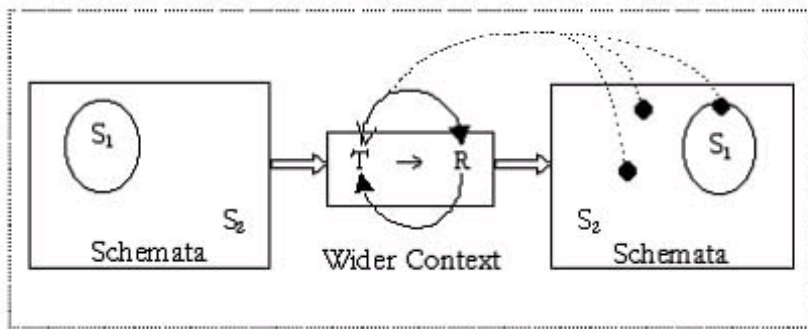


Figure 2: IB model (inference activation)

where

- ⇒ message direction from encoder to decoder
- ⋯⇒ schema-based inferences activated during language processing
- forward and backward inferences (as indicated by arrow direction)
- relevant activated schemata
- T theme
- R rheme

4.3. Principle of Acceptable Message Development

Based on the IB model, an interesting fact about theme becomes evident. Insofar as it activates a boundary which excludes impossible rhemes, it constrains what can come after it. We shall refer to this as the principle of acceptable message development (AMD), which states:

The AMD principle dictates that the thematic head of a clause must be acceptably developed by the rheme in the context of the interactive encounter, whether in the written or spoken mode.

However, insofar as theme is capable of activating a boundary of acceptability, it also carries with it the potential of being unacceptably developed by an inappropriate rheme. We seldom, however, see the actualisation of this potential because there is seldom any benefit to the language user to exploit this potential. The AMD principle turns out to be a useful means for delimiting theme. Using well-formed clauses, the line separating theme and rheme is sometimes difficult to discern. However, since the thematic element has the potential of being unacceptably developed, we may approach the problem from another angle and find out what would happen if we were to flout the AMD principle. Specifically, what would happen if we were to form an anomalous construction (in context) by retaining the initial element of the clause? We may discover, at first, that it is not possible for such a clause to be formed based on the clause-initial element and the prevailing context. If so, that element cannot be regarded as being fully thematic since we have not yet been able to locate an unacceptable rheme. What needs to be done, then, is to keep flouting the AMD principle for each succeeding element until we are able to form an unacceptable clause comprising a theme-rheme mismatch. That stretch of language that is AMD-floutable is the thematic segment of the clause. The notion of acceptability is of key importance here, and it is understood in terms of one's knowledge or perception of reality, a particular worldview, and common sense. It includes, but need not be confined to semantic well-formedness.

If themes have varying degrees of ability to constrain the clausal message, it might be more useful, then, to reclassify themes, not in terms of the Hallidayan metafunctional categories, but in terms of headedness. Unlike Halliday, our emphasis here is on locating an initial-element that is able to enter into a theme-rheme mismatch. Labelling themes in terms of head or non-head acknowledges, as Halliday does, that there is an internal structure within theme, but it also emphasises the idea of thematic prominence, of some element being more (or less) able than another to satisfy the flout-AMD procedure. Thematic non-heads provide textual, judgemental, or stative information on the thematic head, such as modal and conjunctive adjuncts. In line with the wave-like effect of thematic

prominence (Halliday, 1994:336-337), thematic post-heads still retain some thematic flavour but are at the ebb of the wave. Such elements are therefore also regarded as being thematic, but only weakly so.

Let us now examine how the AMD principle may be flouted to delimit the thematic head. Assuming normal context, consider (5a-b) (the symbol # is used to indicate that the construction is anomalous):

- (5) a Bill laughed.
- b #Bill dissolved.

By the flout-AMD procedure, therefore, the initial element "Bill" is minimally enough for an unacceptable clause to be formed and is functionally the thematic head.

Next, consider (6a), again assuming normal context:

- (6) a Fortunately, Bill laughed.

Somewhat mechanically, we might proceed to form (6b) and conclude that the AMD principle is floutable using "Fortunately" as the minimal element:

- (6) b #Fortunately, Jack dissolved.

Examining (6b) carefully, however, we soon realise that the construction is odd not because "Fortunately" is unacceptably developed by "Jack dissolved", but because "Jack", as a human being, cannot dissolve. That is to say, a theme-rheme mismatch is not yet possible using "Fortunately" as the minimal element. It functions merely as a thematic pre-head, and we need therefore to look further right for the thematic head. By reapplying the flout-AMD procedure to the next word in (6a), we obtain:

- (6) c #Fortunately, Bill dissolved.

This leaves us with "Bill" as the thematic head, and "Fortunately" as the thematic pre-head.

Often, when a preceding text is used as contextual information, it becomes trickier attempting to establish a theme-rheme mismatch. Consider, for example, (7a-b):

- (7) a Bill studied hard for the test. But he failed it.
- b Bill studied hard for the test. #But he passed it.

In (7a), the use of "But" in the second sentence signals an expectation of contrast that is not followed through in the second sentence in (7b). On this count, it would appear that "But" is the thematic head since there is a mismatch between "But" and "he passed it" in (7b). To treat such elements as the thematic head, however, is problematic, not because they are optional elements in clause structure, but because, more crucially, they are non-robust in character (see further below for a fuller description). That is to say, even though co-text is an important consideration in the delimitation of theme, the thematic head itself needs to be sufficiently robust as a message peg. Modal and conjunctive adjuncts lack this feature and have only an indirect influence on the flow of the message proper. Monaghan, in fact, regards such themes as non-cognitive since:

[...] they only draw attention to the relation of the [clause] as a whole to something else. They thus do not prevent a cognitive thematic choice being made in the same clause.

(Monaghan, 1979:133)

How is robustness determined, particularly for optional elements such as conjunctions and adjuncts? In essence, this depends on how well the candidate for thematic head is integrated within the

clause. Quirk, Greenbaum, Leech, and Svartvik (1972:421) regard a clausal element as being integrated in clause structure if it is affected by clausal processes. For example, circumstantial adjuncts (as thematic heads) exhibit integration by providing additional information that is unique to the clausal message. This makes it possible for them to be contrasted with another similar adjunct in alternative negation, as in (8a). In contrast, this is not possible for non-robust adjuncts and conjunctions, as evident in (8b-c):

- (8) a As a teenager, Bill loved to play in the mud, but as an adult, he detested it.
- b *Amazingly, John did not go to the train station, but surprisingly, he did.
- c *However, John did not go to the train station, but therefore he did.

For (7a), then, any attempt to formulate an anomalous construction by the flout-AMD procedure and the robustness condition returns us, once again, to our discussion on (6a-b). The thematic head of the second sentence in (7a) is therefore not the conjunction, but the pronoun "he".

A problem that might be encountered with the flout-AMD procedure involves make-believe worlds where almost anything is possible. To get round this problem, situation-specific factors and updated knowledge must necessarily be taken into account, particularly in an explanatory model that is reliant on inferential processes (Morrow, Bower, and Greenspan 1990). Context remains an important consideration in the IB account of the message structure of the clause since interpretations can and do vary from one situation to another. Using a simple example, Kittay illustrates this clearly:

Smith is a plumber [...] may be interpreted literally or metaphorically. [The sentence] is metaphorical if we know that Smith is not a plumber but a surgeon.
(Kittay, 1987:100)

Cohen also shows that (9a) below would most certainly be considered unacceptable if it were an isolated unit:

- (9) a The sparkle on summer dew has just run off with the milkman. (Cohen, 1993:68)

Yet, in context and with updated knowledge, it would be intelligible as an instance of a metaphor if it occurs in a passage containing (9b) as an earlier unit:

- (9) b My wife is the sparkle on summer dew. (Cohen, 1993:68)

It is proposed here that context be viewed in two broad forms. The first, primary context, applies to the general situation of the real world. This is the world that we are familiar with and comprises the smaller, restricted context of the communicative encounter. The second, secondary context, is the make-believe world where reality assumes a somewhat distorted character. Secondary context, however, does not immediately apply to all fictional encounters, but only to those where the make-believe world has been endowed with some unique characteristic that is either far-fetched or impossible. The children's tale in (10a), for example, represents a situation of secondary context. The flouting of the AMD principle in this case must therefore result in a linguistic construction that is anomalous in line with the adjustments that need to be made in the secondary context. For example, from the second sentence in the children's tale in (10a), we may form (10b) by the flout-AMD procedure:

- (10) a They held a sewing-meeting and each toy borrowed a needle from Eileen's work-basket, threaded it with cotton, and began to sew hard. (Blyton, 1966:78)
- b #They shed skin [...]

5. Comparison

As a complementary framework, the IB model produces results that are, in large part, identical to those of the Hallidayan framework. That is to say, the Hallidayan topical theme corresponds

generally to the thematic head of the IB model.

An identical result, for example, is returned for the analysis of (3), reproduced below as (11a):

(11) a Is he sad?

The explanation, however, differs. The IB analysis avoids the difficulty encountered in the Hallidayan framework which relates the topical theme to the first experiential component in the clause. Rather, by applying the flout-AMD procedure, it can be demonstrated that the verb is unable to enter into any mismatch between itself and the following segment. An anomalous result, assuming primary context, can only be obtained when the personal pronoun "he" is included:

(11) b #Is he creamy?

Nevertheless, differences in analysis exist, and these involve two broad areas:

(a) Weak themes in post-head position. Such elements tend to involve modal or conjunctive adjuncts, as in (12).

(12) Bill, fortunately, paid for the meal.

In the Hallidayan framework, the modal adjunct "fortunately" is regarded as part of the rheme. The IB model, on the other hand, analyses it as a post-head with weak thematic flavour. The presence of such post-heads may turn out to be useful in describing the "method of development" of particular texts (Fries, 1981, 1995a, 1995b, 1995c). A text, for example, may have a subjective feel about it because of the presence of modal adjuncts in pre- and/or post-head positions. The text analysis, however, may fail to pick this up if weak themes were to be bundled as part of rheme.

(b) Existential, cleft, and extraposed-subject constructions. The problem with existential constructions was raised in Section 3. It was pointed out that the empty subject, having no representational function, does not qualify as the topical theme. An alternative analysis is offered by the IB model. Using the flout-AMD procedure, it is not possible to formulate a construction that is anomalous due to a mismatch between "there" or "there+be" and the following segment. This suggests that the thematic head of (4), reproduced below as (13a), is not "there", but the entity construed existentially:

(13) a There is a man outside.

b #There is a man in the atomic particle.

For cleft and extraposed-subject constructions, the flout-AMD procedure produces similar results:

(14) a It was the conference that ended late.

b #It was the conference that melted.

c It is a shame to see her cry.

d #It is a shame to care for others.

On a note of caution, it is not suggested that the result in (13b) is uniformly true for all existentials (see further Leong, 2000b). Although less common, a range of verbs other than "be" are permitted after the empty subject, namely, "exist", "come", "ride", among others. For example:

(15) a There lives a man down the street.

The flouting of the AMD principle remains as the only test of the thematic head status of each initial element. In the case of (15a), the flout-AMD procedure gives us the following result, with "There" as the pre-head, and "lives" as the thematic head:

6. Conclusion

The IB model, admittedly, goes against the grain of Halliday's metafunctional approach to language analysis. It does not depart, however, from the fundamentals of theme and rheme. As I have tried to show, the relationship between theme and rheme is not merely sequential, but one that is centred on the clausal message. Beyond a certain point in the clause, the IB model claims that the message can be developed in an acceptable or unacceptable way (see Figure 1). It is the thematic head that dictates what is, and what is not, permissible as the development of the message. The theme is therefore pivotal in determining how the clausal message will eventually proceed in the rheme.

In some of his lexical glosses on theme, interestingly, Halliday (1994: 37-38) refers to it as the "point of departure" and "the ground from which the clause [takes] off". By their very nature, such glosses are imprecise, but they curiously hint at the essence and function of theme as outlined by the IB model. As we have seen, theme constrains, in context, what can come after it. It serves as a point of departure in the sense that it permits a range of developments after it, but not others. The clausal message progresses up to a certain point in the clause where it becomes imperative for that initial segment to be acceptably developed by the rest of the clause. The message, as it were, cannot take off until such a point is reached.

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