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Theme analysis of narratives produced by children with and without Specific Language Impairment

JULIE THOMSON

School of Language and Media, University of Newcastle, NSW, Australia

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Abstract
Theme is defined within the Systemic-Functional Linguistics framework as the point of the departure for the clause and therefore important for text organisation. Aspects of theme are examined in the elicited narratives and story retells from a group of 25 5–8 year-old children with Specific Language Impairment (SLI) and a group of 25 age-matched children with Typically Developing Language. The analysis indicated that subjects with SLI used less variety and complexity in themes with more than one element but this is suggested to reflect localised lexicogrammatical problems. Analysis of the aspects of theme which are more reliant on text-level resources, namely marked theme and theme progression patterns, yielded equivocal results. No significant inter-group difference was found in the subjects' representation of marked Theme and only one of the two progression patterns showed a significant difference. These findings are discussed in relation to the theoretical implications for the description of narrative abilities in SLI.

Keywords: *Narrative analysis, theme, Specific Language Impairment*

Introduction

This study compares the narrative texts of children with Specific Language Impairment (SLI) with those from an age-matched group who have Typically Developing Language (TLD). Narrative was sampled via a story retell task and recount of a personal experience. The two groups were compared to investigate differences in the way they try to make their texts "work" through their realisation of theme. The model of Systemic-Functional Linguistics (SFL) (Halliday, 1994) is used to analyse the texts and describe the differences. Discussion about the basis of these difficulties is then cast within the theoretical framework of this grammar to investigate how SLI impacts on narrative abilities.

Narrative is developmentally significant as the first type of extended discourse in which the child engages (Westby, 1984). Researchers have linked the narrative abilities of preschoolers with emergent literacy abilities (Kaderavek, & Sulzby, 2000; McCabe, & Rollins, 1994). Hedberg and Westby (1993, p. 9) have described it as a "bridge to literacy" in that it facilitates the transition from the highly contextualised and more concrete oral

Correspondence: Julie Thomson, School of Language and Media, The University of Newcastle, University Drive, Callaghan, NSW 2308, Australia. Tel: 61 2 49217348. Fax: 61 2 49217386. E-mail: julie.thomson@newcastle.edu.au

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language of informal interactions to the decontextualised and more abstract literate language of classroom discourse.

A variety of linguistic and cognitive models have been proposed to account for the processing and production of narratives. These include Applebee's developmental stages (1978), Story Grammars (Mandler, & Johnson, 1977; Rumelhart, 1975; Stein, & Glenn; 1979; Thorndyke, 1977), the more generalised schema known as Mental Models (Garnham, 1985) and High Point Analysis as proposed by Labov and Waletzky (1967). These frameworks accommodate the global aspects of text organisation so that a separate ''grammar'' is needed to account for localised aspects of text creation. By contrast, the SFL model can accommodate both macro- and micro-aspects within a unitary grammar. (For a further discussion of this issue, see Thomson, 2003.)

Developments within the linguistic field of pragmatics have prompted speech pathologists to focus more attention on the communicative *needs* of clients (Smith, & Leinonen, 1992). This shift was reflected in assessment and intervention which refocused on language in *use* thus highlighting discourse-level abilities. For children with SLI, narrative discourse in particular has been identified as an important indicator of academic performance and literacy outcomes (Bishop, & Edmundson, 1987; Feagans, & Appelbaum, 1986). Further, it has been suggested that the difficulties that children with SLI experience with this text type do not just reflect their observed difficulties with syntax or morphology (Paul, & Smith, 1993). For example, Westby, van Dongen, and Maggart (1989) suggest that children with language learning difficulties may have difficulties construing what the listener needs to know and consequently, make wrong assumptions. They also speculate that there may be difficulty with organising the text, understanding the underlying time and cause-effect relationships and developing the structural knowledge needed for text comprehension.

The articles in this journal reflect the increasing clinical interest in SFL. With respect to SLI specifically, however, applications have been confined to cohesion analysis (see Liles, 1993, for an overview of such applications). Within SFL, cohesion is viewed as only one of the resources for text creation. Textual meaning can also be realised through the structural resources directing the distribution of given and new information and Theme (Halliday, 1994). The empirical dissociation of cohesion from other textual resources compromises an understanding of how cohesion can relate to other aspects of textuality such as theme and, in turn, to the system as a whole.

The reader is directed to Armstrong's (2005) introductory article in this issue for the necessary background to SFL which allows this discussion to focus on the textual metafunction and theme in particular. Textual, the third kind of meaning, ''breathes relevance into the other two'' (Halliday, 1994, p. xiii) and provides online resources for guiding ideational and interpersonal meanings (Matthiessen, 1995). The textual metafunction reflects the organisational choices available to us: ''which part of the message to foreground, which to background, which part to signal as being of the most interest, what connections to create between different parts of the message, and so on'' (Ravelli, 2000, p. 51). Realisation of textual meaning then is contingent upon the speaker understanding what the text needs to be effective in the context and the resources to ''enable'' this effectiveness. Theme is central to this enablement and to the method of development of the text (Matthiessen, 1995).

Functionally, theme ''serves as the point of departure for the message; it is that with which the clause is concerned'' (Halliday, 1994, p. 37). Theme can also occur above the level of the individual clauses, at the level of clause complex, paragraph and whole text

(Martin, 1992). Structurally, clause-level theme occurs in initial position in English. The remainder, which starts at the end of the first topical element, is designated as rheme. In the following example from the retell text of a child with typically developing language, all of the underlined elements constitute the theme of the clause: But did he[1] ever turn green again?

Theme analysis

It is necessary to further reflect on theme at this point before the specific hypotheses are presented at the end of this section. Three aspects of theme realisation are of relevance to the present research: theme *markedness*, theme *progression* patterns and *multiple* themes. Firstly, theme markedness has to do with the way the mood structure (part of the interpersonal metafunction) maps on to the theme structure of the clause. The unmarked or default position for theme for declaratives, for example, is conflated with the grammatical subject. When the speaker/writer opts for a marked choice then, they are ''signalling that all things are *not* equal, that something in the text requires an atypical meaning to be made'' (Eggins, 1994, p. 302). Martin (1992, p. 447) observes that theme markedness may differ according to mode so that in oral texts, marked themes ''punctuate rather than predict, annotating the text in episodes as it unfolds rather than scaffolding it as macro-constituent structure that is in some sense pre-conceived'' (as for written texts). For example, an adjunct (realised by an adverbial group or prepositional phrase) can be chosen as theme as in the following example from the elicited text of a child in the SLI group: Yesterday I played soccer. Complement can also be selected as marked theme as in this example from the elicited text of a child with TLD: And so was the girl. These examples highlight the possibility of a continuum of markedness, as suggested by Thompson (1996), whereby the second example of marked theme complement could be considered to be more highly marked than that of the adjunct. Thematic choice can reflect the mode of the speaking/writing context but would also necessarily reflect the diversity of the child's resources. For example, a younger child with more limited resources may be restricted to less marked options.

Theme progression concerns where themes come from and how they relate to other theme-rheme selections in the text. Progression can be established by examining the cohesive ties within the text (Fries, 1995); whether, for example, a theme relates to the preceding theme or rheme (Martin, 1992). Further, Fries (1983, 1995) suggests that, as theme progression is concerned with the way that text develops, it may be related to text genre and reflect more general structural organisation. The two predominant patterns in the children's data were that of:

1. Theme iteration. For example, in the model text, Picasso is the theme of the first clause and is subsequently iterated as ''he'' in the subject themes of subsequent clauses.
2. Linear theme or zigzagging occurs when the rheme of a preceding clause is picked up as theme in the subsequent clause. The following example illustrates this: (a subject describing a pet) I named its name Biscuit (rheme underlined) || and it scratches people.

For markedness, it is the ideational element of the theme that is of interest. If a theme comprises only that element then it is referred to as a simple theme. Multiple describes themes that also have textual and/or interpersonal elements. The realisation of elements in

multiple themes is: first, textual then interpersonal then topical or ideational (invariant sequence), which resonates with the three-way categorisation of the metafunctions themselves. The following example of a multiple theme with rheme ellipsed appeared in the model text and frequently reappeared in the texts from both groups of children:

Or	was	he?
Textual theme	Interpersonal theme	Topical theme

With reference to theme in narrative texts, Fries (1995) argues that it has a particular role in orientating the listener to the episodic breaks by foregrounding the temporal or spatial markers (Fries, 1995). Plum (1988) relates theme to narrative macrostructural elements: crisis or high-point stage would be characterised by participants as theme whereas event reference would predominate in the resolution stage. Based on a small sample of written narratives collected under a variety of conditions, Fries (1995) reported some preliminary trends for ideational themes which included: a low frequency of marked themes and a relatively high incidence of simple themes. Within the same study, Fries also speculated about the relationship between thematic progression patterns and genre type. For example in a sophisticated literary narrative, there was a trend toward linear progression of subsequent themes deriving from previous rhemes, whereas, in a newspaper obituary, the iterative pattern of subsequent themes deriving from previous themes predominated. The iterative pattern was also more common in texts targeting younger readers prompting him to suggest that patterns of thematic progression are not randomly distributed within texts. It is anticipated then that the pattern for children's narrative would be largely iterative.

Hypotheses for this research

The difficulties that children with SLI experience in their construction of narrative texts and cohesion, in particular, are well documented (Bishop, & Edmundson, 1987; Paul, & Smith, 1930). This study explored whether this difficulty arose from a *specific* "textual" problem which was in addition to the difficulties the child experienced at the lower levels of the rank scale (see Armstrong, 2005), namely, morpheme, word, phrase and clause. SFL was identified as a unitary framework which could accommodate both the relationship between text and context and all structural levels. Theme realisation was identified as a previously unexplored aspect of textual meaning which may clarify text-level difficulties and differentiate them from that which was more representative of the localised difficulties associated with the lexicogrammar, for example, pronoun errors, omission of morphological endings.

In this research (Thomson, 1998, 2000), it was hypothesised that theme progression and marked theme patterns would be more reflective of the whole-text-problems whereas the realisation of multiple themes would be more closely related to localised lexicogrammatical difficulties. For example, if the child has a limited repertoire of conjunctions then logically there may be fewer representations of the textual element within theme. If the children with SLI have poorer appreciation of how to make a text "work" within the context, then their theme progression patterns and marked theme usage would significantly differ to that of the TLD group. Based on previous research, a predominant pattern of iteration would be expected for both the retell and the elicited texts of both groups but it was hypothesised that:

(a) there would be a significant inter-group difference with the SLI group using the less challenging iterative pattern more frequently;

(b) both groups would use the linear pattern with low frequency but there would be significant inter-group difference with the TLD group making greater use of this pattern;
(c) marked theme would similarly be a low frequency pattern but again it would show an inter-group difference with TLD subjects using significantly more marked forms;
(d) multiple theme usage would also differentiate the two groups significantly because it is more susceptible to the difficulties the SLI group experience with the internal composition of the clause level themes.

With respect to text type difference, it was hypothesised that the TLD group would show an increased level of marked theme and multiple theme usage on the retell task where the child has an opportunity to "borrow" from the examples of marked and multiple themes used in the model text. Thus any significant inter-group difference found in the elicited texts would be accentuated in the retell condition. For theme progression, however, the less demanding and more prevalent pattern of Iteration predominated in the model text used for the retell. It therefore does not provide the same opportunity for enhanced performance so that a difference between text types was not anticipated.

Method

Subjects

The subjects were 50 school children aged between 5 years, 1 month and 8 years 8 months, all of whom were native speakers of English. There were two equal subject groups, one with SLI and the other, a group of children with TLD who were within 6 months of the chronological age of the paired subject with SLI. The mean age for the SLI group was 6 years and 11 months with a median age of 6 years and 10 months and the mean and median age for the children with TLD was 7 years. The ratio of male to female subjects in the SLI group was 2:1 and for the 3:1 in the case of the TLD group. Classroom teachers selected the TLD subjects on the basis of fulfilling a specified set of exclusion criteria which included:

1. aged within $\pm$ 6 months of the matched SLI subject;
2. corrected vision not significantly impaired;
3. no known hearing impairment;
4. neither the top nor the bottom two in the class for academic performance;
5. no significant behavioural or emotional problems;
6. no known neurological problems/deficits (such as epilepsy, previous head injury);
7. no known history of speech and/or language problems or involvement with a Speech Pathologist;[2]
8. monolingual English speakers.

Parents/caregivers of both groups of children were asked to include information about the occupational status of the principal caregiver(s). Occupational group was categorised according to the Labour Force Census Collection (Australian Bureau of Statistics, November, 1998) with the groups approximating a similar profile for this data.

The subjects in the SLI group were all enrolled in support language classes characterised by small class sizes, a language-focused curriculum and the provision of specialist speech pathology services. Children may not evidence the same level of severe language impairment at all points during the course of their stay in the class but it is anticipated

that each child would return to a mainstream educational setting upon conclusion of their stay. Therefore there may be a distribution of severity of language impairments across the categories of mild, moderate and severe depending on the length of time spent in the class and/or the level of responsiveness to the specialised intervention available. However, at the beginning of their enrolment, all subjects would have been considered to fall within the moderate to severe categories of SLI as diagnosed by a speech pathologist other than the researcher. They would also have had an audiological assessment which established normal hearing sensitivity and a general psychometric assessment performed by a school counsellor/educational psychologist to establish that their non-verbal intelligence was within normal limits for their chronological age. Ethics clearance was sought for accessing subjects and, in the case of the subjects with SLI, their speech pathology records. Permission was also sought from the parents/carers and the children themselves.

A further inclusionary criterion for the SLI group was applied at the point of data collection. The Goldman-Fristoe Test of Articulation (Goldman, & Fristoe, 1986) was administered to each child prior to the elicitation of the narrative texts. A child's performance needed to exceed the 16th percentile and therefore be within two standard deviations of the mean so that a significant proportion of the text produced would be intelligible to the examiner.

Formal language testing data

Formal language testing was carried out in order to profile the target group whose membership had been established by their eligibility for support language class placement. The Clinical Evaluation of Language Fundamentals-Revised (CELF-R), (Semel, Wiig, & Secord, 1987) was administered to any child who had not been assessed using this tool within the previous 6 months. If such data already existed, it was accessed from the speech pathology file. This test battery was used to provide an overview of the children's language functions across a variety of modalities to indicate level of severity of the impairment and a profile of the group.

Each child was also assessed by the researcher using the Peabody Picture Vocabulary Test Form M (Dunn, & Dunn, 1981) to indicate the level of receptive vocabulary which may impact both on the comprehension of the story provided in the retell task and on the lexical diversity evident in the texts produced.

Data collection

Sample texts were collected on the same day from each subject although the total data collection period extended over some months. All texts were collected and transcribed by the same researcher. Subjects were asked to give an account of something that had happened to them with prompts provided if the child did not initiate a recount of some experience. These prompts were consistent with those used in elicitation of texts in Peterson, and McCabe's (1983) study and included prompts about experiences of birthday parties, holidays, sibling quarrels and hospitals. If the text offered in response to one of the prompts resulted in a text of less than five clauses in length then a further prompt was provided. Once the child embarked on a text, the examiner only provided requests for clarification if the clause (or part thereof) was unintelligible. The child was also offered general prompts such "Tell me some more" to encourage them to continue. If the child produced more than one text then the text with the greater number of clause units was included in the analysis.

A variation of the emergent storybook reading task described by Sulzby (1996) and Kadeverak, and Sulzby (2000) was undertaken as the second type of narrative elicitation. Sulzby, and Zecker (1991) suggest that storybooks are a useful elicitation stimulus as a past or non-present event is represented in an accessible way to the child and should be a familiar context for children in societies with a literate tradition. The examiner read a storybook (*Picasso, the Green Tree Frog*, Graham, 1985) to each child individually and encouraged them to look at the pictures whilst following the story. The children were then immediately asked to retell the story using the illustrations in the book as prompts. Issues for narrative elicitation have been comprehensively covered by Liles, Coelho, Duffy, and Zalagens (1989). The most significant elicitation issue for this context is how well written text can serve as a model for an oral text. The justification for this text selection is to reiterate the view of narrative as transitional between written and oral discourse modes so that it can be used as a predictor of emergent literacy.

Data collection occurred at the school where the child was currently enrolled. Each subject's performance on the Goldman-Fristoe and the two texts were overtly recorded using an EIKI Model 3729 Audiocassette Recorder and transcribed by the examiner.

Data analysis

The texts were transcribed and segmented into clauses and themes were identified and coded utilising a software package designed for qualitative data analysis (QSR NUD*IST 4, 1997). In the case of elliptical clauses where either the theme or rheme was appropriately ellipsed, they were analysed as their explicit or non-ellipsed forms. Analysis was not attempted on minor clauses as theme-rheme identification was deemed impracticable nor did it offer useful information (as suggested by Thompson, 1996).

Thematic analysis (based on Halliday, 1994) identified theme as including a topical element which consisted of the whole nominal, verbal, adverbial or prepositional phrase thus filling the slot for the first unit of ideational meaning. If it was a nominal group, any pre/post modification and co-ordination was also included. Other elements of theme include the textual, for example, conjunctions and interpersonal, for example, mood markers (such as the finite in polar interrogatives). Preposed theme in which the speakers "announce" their theme explicitly (Thompson, 1996) was also identified in this analysis. Thompson suggested these would be of relatively low frequency but they occurred frequently in the dialects of the children in this study, for example "Khan, he's a bit of a nuisance" (found in an elicited text produced by a subject with TLD).

Thematic progression

The thematic progression analysis was carried out on both types of texts from all subjects, patterns were identified and percentages of links were calculated. These patterns were categorised into: linear, where the theme of a subsequent clause is retrieved from the rheme of the preceding clause and iterative, whereby the themes of clauses are progressively co-referential (from Danes, 1974).[3] An example of decision-making about endophoric reference for a complex nominal group as theme such as "his pink spots" involved looking for, in the first instance, reference to "spots". If unsuccessful, then some reference to colour was sought and finally, a reference to "his". The most immediate preceding reference for the thematic elements was considered as the reference to which it was tied.

Each pattern was calculated in terms of the number of links which conformed to the specified pattern as a proportion of the total number of possible links for that text.

Theme markedness

Theme in declaratives was categorised as marked if realised by an adjunct (adverbial groups or prepositional phrases) or a complement (a nominal group not functioning as the grammatical Subject). Complement themes are considered the ''most marked'' since the complement, as a nominal group, could have been the subject but was not selected (Halliday, 1994; Thompson, 1996). For declaratives, an unmarked example would be a subject realised by nominal group, nominal group complex or embedded clause. Marked themes were calculated as a proportion of total themes.

Multiple theme analysis

Multiple themes have a textual and/or interpersonal element in addition to their ideational element. Multiple themes were calculated by tallying all of the multiple themes, that is, those containing an ideational in combination with a textual and/or interpersonal element except for the ideational + topical combination in which the textual was realised by ''and''. As the motivation was to assess the lexicogrammatical diversity which supports the distinction between simple and multiple themes, it was decided to exclude this co-ordinator. It occurred very frequently in both groups' texts and was often used in a continuative rather than co-ordinator function. Children have been reported to use ''and'' as a means of heralding an upcoming event (Peterson, & McCabe, 1991) rather than expressing meaning relationships between clauses. The results therefore highlighted those who were able to use textual resources other than ''and''. Modified multiple themes as a proportion of total themes were calculated for both text types.

Reliability

Assessments of inter-rater agreement between the researcher and two other raters for the data analysis were carried out on 16% of the subjects' texts (four TLD and four SLI subjects). The two other raters had previous experience with the SFL model and were provided with specific information about theme and how thematic analysis was undertaken in this instance. Point to point agreement was achieved at a level of 94.9%. In all cases where discrepancies occurred, consensus agreement was reached after discussion.

Results

Marked theme hypothesis

It was hypothesised that there would be a difference in representation of marked Themes between the two groups and between text types. The descriptive statistics for the marked theme data are summarised in Table I.

As can be seen from this data, the standard deviations relative to the means are very high therefore indicating a high rate of degree of variability overall. This variability was particularly evident in the elicited texts and for the SLI group. 2x2 Factorial Analysis showed no significant difference overall between the SLI (M=5.12) and TLD (M=7.75) groups in their realisation of marked themes when the data for both text types was

Table I. Descriptive statistics for marked themes for both text types.

GROUP	Mean	Std. deviation	n
ELICITED SLI Group	6.6640	12.3752	25
TLD Group	8.8760	7.1543	25
Total	7.7700	10.0662	50
RETELL SLI Group	3.5840	5.3305	25
TLD Group	6.6320	6.7012	25
Total	5.1080	6.1872	50

combined nor when the text types were examined individually. However, the difference between the proportion of marked themes for the elicited (M=7.77) and retold texts (M=5.12) (without reference to group) approached but did not reach significance (p=0.085). The null hypothesis that there would be no significant difference between the groups or text types could therefore not be rejected on the basis of these results.

The low incidence of marked themes for both groups generally prompted a closer examination of the realisation of marked theme revealing a predominant pattern of circumstantial adjuncts. Some formulaic marked theme was identified as in this example: ''Up he went'' (from a retell text produced by a child with SLI). This is a pattern to which the child is frequently exposed in nursery rhymes (''Up Jack got'') and adult language (''Up you get'') and therefore may not be indicative of the child's actual ''marking'' resources. Marked theme was used for contrast as can be seen in this example from an elicited text of a child with TLD:

''And off my Nana I got a game
And off Lauren I got a game''

In the retell texts, the realisation of circumstantial adjunct as marked theme is predominantly ''one day…'', sometimes with slight variation such as ''one time'' or ''this time'' when occurring in the same context (that is, something strange happening or going wrong).

Subjects with TLD who used circumstantial adjuncts as marked themes in their retold text were also more likely to use them in their elicited texts with 12 out of the 17 who used circumstantial adjuncts as marked themes using them in both kinds of texts. The pattern was not replicated for the subjects with SLI as only four of the 12 evidenced them in both contexts. These results are represented in Table II below.

Marked versions of preposed themes occurred where the preposed unit is actually the complement rather than the subject, for example, ''The point of the boat, you turn it around'' (from an elicited text of a child with TLD). These occurred in the elicited texts of two of the TLD subjects. The following example is an instance of another type of

Table II. Representation of circumstantial adjuncts as marked themes.

	No. of SLI Subjects (n=25)	No. of TLD Subjects (n=25)
In both text types	4	12
Elicited only	3	2
Retell only	5	5
Didn't use	13	6

Table III. Representation of complements as marked themes.

	No. of SLI Subjects (n=25)	No. of TLD Subjects (n=25)
In both text types	1	0
Elicited only	2	9
Retell only	1	0
Didn't use	21	16

complement theme from a subject with TLD (and the only instance of this kind): ''And so was the girl'' (elicited text). Given its infrequency, it may represent a later developing feature. Table III represents the incidence of complements as marked themes for each text type categorised according to text type.

Nine of the 25 subjects in the TLD group then used some form of complement as marked theme as opposed to only four of the subjects with SLI.

For marked themes then, the overall difference between the groups in the frequency of usage of marked themes did not reach significance. Statistically, there was no significant interaction between the groups and text type factors but there was some suggestion of a difference overall between the text types although this difference did not reach significance.

Thematic progression hypothesis

The hypothesis was that there would be a significant difference between the two groups in their thematic progression patterns. Both text types were examined with the results for the linear and iterative patterns compared separately. The descriptive statistics for the proportional data for patterns of linear progression are depicted in Table IV.

The results of the 2 x 2 factorial analysis showed that, across text types, the TLD subjects ($M=17.00$) produced a significantly higher proportion of linear thematic progression than did the SLI group ($M=11.03$), $F(1,48)=7.72$, $p<0.01$. However, there was no significant difference between the groups when the individual text types were examined. A significant trend was identified in the data for text types overall. Irrespective of group membership, there was a significantly higher incidence in linear patterns on the elicited texts ($M=20.94$) than the retell texts ($M=7.1$), $F(1,48)=32.73$, $p<0.001$. Therefore the null hypothesis could be rejected in the case of linear patterns as the two groups were shown to differ significantly in this respect. As discussed, there was limited representation of the linear pattern in the model text for retell (8.7%). Where linear progression occurred in the model text, it was usually as a result of a circumstantial marked theme resulting in the grammatical subject becoming rheme.

Table IV. Descriptive statistics for the proportional data for linear progression.

GROUP	Mean	Std. deviation	n
ELICITED SLI Group	15.7360	13.0799	25
TLD Group	26.1440	15.5337	25
Total	20.9400	15.1531	50
RETELL SLI Group	6.3240	5.5490	25
TLD Group	7.8680	8.9923	25
Total	7.0960	7.4361	50

Table V. Descriptive statistics for the proportional data for iterative progression.

GROUP	Mean	Std. deviation	n
ELICITED SLI Group	57.1720	20.6157	25
TLD Group	54.8640	15.6896	25
Total	56.0180	18.1685	50
RETELL SLI Group	83.3760	10.4465	25
TLD Group	78.1920	12.2324	25
Total	80.7849	11.5583	50

The descriptive statistics for iterative progression for both text types are represented in Table V.

The 2x2 factorial analysis showed no significant difference between the SLI group (M=70.27) and the TLD subjects (M=66.53) in their use of iterative theme patterns and no significant interaction between group and text factors. However, there was an overall significant difference in text types with the retell texts (M=80.78) demonstrating more iterative progression patterns than the elicited texts (M=56.02), $F(1,48)=77.49$, $p<0.001$. Both groups' texts therefore reflected the predominantly iterative pattern in the model text.

Themes designated as ''other'' included the introduction of new characters or some new element of ideational meaning. In the case of some TLD subjects, use of the ''empty'' or existential subject ''there'' accounted for the majority of new ideational themes. The existential subjects allowed the narrator the opportunity to provide more setting information as illustrated in the following example: ''And there's a big pool with a spa and a waterfall'' (used in an elicited text by a child with TLD). There were no incidences of existential subjects in the texts from subjects with SLI. Also in this category were instances of subjects offering evaluative comment either about the whole text or their own performance.

In the quantitative analysis of patterns of thematic progression then, the linear pattern differentiated the two groups but the iterative pattern did not. Therefore the null hypothesis can be rejected for the linear pattern but not for the iterative.

Multiple theme hypothesis

Secondly, it was predicted that there would be a significant inter-group and text difference in the realisation of multiple themes. Multiple themes occurred when there were elements other than the topical (obligatory) element in the theme, that is, either a textual or interpersonal element or both. The multiple theme data represents a proportion of the total number of themes realised in each text for both text types and is represented descriptively in Table VI.

Table VI. Descriptive data for multiple themes in both texts.

GROUP	Mean	Std. deviation	n
ELICITED SLI Group	3.9320	6.5511	25
TLD Group	5.5280	6.7112	25
Total	4.7300	6.6130	50
RETELL SLI Group	1.5860	2.850	25
TLD Group	10.1560	9.2569	25
Total	5.8710	8.038	50

As for the marked theme data, the standard deviations relative to the means were very high but this was particularly the case for the elicited texts from the SLI group. The statistical analysis revealed that the TLD subjects (M=7.84) used proportionally more multiple themes than did the SLI group (M=2.76), $F(1,48)=10.92$, $p<0.01$. but this difference was greatly accentuated when the retell data only was examined. There was a significant interaction between the group factor and the text type in this case. The difference in multiple themes between the children with TLD (M=1.586) and those with SLI with SLI (M=10.156) on the retell texts was much larger than for elicited texts (where TLD subjects' M=5.528 compared with the SLI subjects' M=3.932), $F(1,48)=9.6$, $p<0.01$. There was no overall difference between the proportion of multiple themes for elicited (M=4.0) and retell (M=4.0) texts. Therefore the null hypothesis that there would be no significant difference between the realisations of multiple themes for the two groups across text types could be rejected.

Consistent with the nature of monologic texts, interpersonal themes occurred with low frequency (Martin, 1992). The multiple themes were therefore predominantly a combination of textual + topical elements. There were no instances of three-element multiple themes in the retell texts from the SLI group. The statistical inter-group differences found between text types is confirmed by the qualitative evidence that the TLD subjects were able to make greater use of the multiple theme realisations in the model text in order to increase both the incidence and the diversity of their multiple theme realisations.

Discussion

It had been hypothesised that the groups would be differentiated both in the proportion of marked themes but this was not confirmed by the analysis. High variability both within and between groups and text types made a significant result unlikely in that such variability requires very large differences in order to reach significance. Qualitative examination of subcategories of marked themes revealed some variation so that, for example, complements as themes may have the potential for differentiating the groups as compared to circumstances. Identifying a continuum of markedness and only analysing the use of more highly ''marked'' themes may therefore yield a significant result. With reference to thematic progression, the groups differed for linear progression only. There are two possible explanations for this phenomenon. One option is that thematic progression per se is not a useful tool for differentiating the two groups. The second alternative, for iterative to be considered the default pattern and, in that sense, the unmarked version of thematic progression, is more consistent with the overall model. Other non-iterative patterns such as linear can then be considered as the marked versions. This is consistent with the results from Fries' study (1995) suggesting that the linear represents a more sophisticated pattern developmentally. Obviously, some patterns are more typical of one text genre than another but in this research the text type was held constant for both groups. Therefore the subjects' ability to participate in the more marked variations may be constrained by their textual resources.

This study found strong support for the second hypothesis in that TLD subjects used more multiple themes overall and for the retell condition, in particular. This further supports the assertion that the restricted lexicogrammatical resources will impact not only on the realisation of multiple themes in original texts but also on usage in retell texts. If the child has either restricted access to and/or impoverished selection of lexicogrammatical resources, then (s)he will differ in his/her ability to realise multiple theme regardless of the contextual support provided. The TLD group was better able to capitalise on the

scaffolding and support for multiple themes provided by the model text. This difference was hypothesised for both multiple and marked themes on the basis that performance would be optimised in the retell condition (although this was not borne out in the case of marked themes). By contrast, the SLI group's performance was relatively constant across test conditions suggesting their restricted lexicogrammatical resources will constrain their ability to capitalise on the scaffolding and examples provided in the retell text.

Limitations

The method for language elicitation used in this research resulted in considerable variability in the samples collected however it may not be possible to eliminate this problem without compromising the naturalness of the language sampling. The variability inherent in the samples elicited in response to the generic prompt of ''Tell me a story'' was higher than that for the retell texts. This inherent variability in the text as a result of text elicitation necessitates that inter-group difference must necessarily be large to achieve statistical significance.

The overall low incidence of the marked theme and the linear patterns may reflect their low frequency in texts of this type or their infrequency in the texts of young children generally so that both groups are still developing mastery over this feature. Both these factors constrain the interpretation of the conflicting results for the marked theme and theme progression hypotheses. Consequently, it is uncertain if the premise that these aspects reflect text-level abilities and can therefore be used to detect the presence/absence of an overall deficit is mistaken.

Theoretical implications

Some reformulation of the theme hypotheses in relation to children with SLI and their language normal peers is obviously required. This needs to be framed to accommodate two contingencies. If subsequent research with increased sampling magnifies the inter-group difference for marked theme to a significant level, then the groups would show both a significant difference for marked theme and ''marked'' thematic progression patterns (that is, patterns other than iterative). This could be interpreted as reflecting the difficulty which children with SLI experience with discourse level language (narrative being a prime example). Alternatively, if subsequent research further minimises the inter-group difference for marked theme and thus confirms its lack of significance, then only one significant result remains, that pertaining to linear patterns. Two explanations present themselves in this instance. The underlying theoretical premise may be unfounded therefore marked usage is not a sensitive indicator of text-level abilities. Alternatively, if the original theoretical basis for the hypotheses is valid, then the absence of inter-group difference indicates that SLI does not significantly impact upon their text-level abilities.

The significance of the linear pattern result may be accommodated within the SFL framework by considering any non-iterative pattern as marked and therefore susceptible to the ''markedness phenomena'', namely that children with SLI are more likely to utilise the unmarked or default version for any aspect of textual organisation. Alternatively, the manipulation of information units required for this zigzagging progression in the linear pattern may be more linguistically and cognitively challenging thus less likely to be used by children with SLI. This explanation highlights the interdependence of Theme with another aspect of the textual metafunction, namely, given-new.

This exploration of theme in narrative confirms the need for discourse level abilities to be managed within the province of grammar rather than as a separate entity. Isolation of discourse abilities precludes the identification of relationships between all levels of text development and recognition of the interactions between the three metafunctions. Frequently, in the course of the theme analysis it has been necessary to go outside the textual metafunction to identify features that may be impacting on theme choices and patterning. Subsuming narrative abilities under the grammatical umbrella of SFL implies that such texts reflect the same systemic and functional requirements and choices that operate for all aspects of text realisation.

Clinical implications

This research reinforces the need for a range of elicitation conditions in functional contexts, as information about theme usage would be difficult to access with formal assessment tools. For retells, examiners need to be aware that the nature of the model text will constrain the subjects' theme selections. Although the results in relation to thematic progression were equivocal, establishing the nature of this inter-relationship between text type and pattern of thematic progression must prompt the examiner to elicit a variety of text types to ensure a sufficiently representative sample is collected. Similarly, if a low incidence for marked theme is to be expected for texts generally, then increased sample size for this analysis is imperative for representative sampling.

Further research

There may be other qualitative measures of theme realisation and patterning such as hyper- and macro-themes which could differentiate the SLI from the TLD groups in this context. Martin defines hyper-theme as "an introductory sentence or group of sentences which is established to predict a particular pattern of interaction among strings, chains and Theme selection" and macro-theme "as a sentence or group of sentences (possibly a paragraph) which predicts a set of hyper-Themes" (Martin, 1992, p. 437). Macro-theme then pertains to the whole text, hyper-theme to the paragraph and theme to the clause. Martin suggests that a text that does not conform to the predicted patterns may be judged as incoherent. However, the relationship between the three levels of theme may be more relevant for written text development. As the primary focus of this research is on oral language analysis, macro- and hyper- themes were not specifically addressed.

Theme analysis may also provide a useful precursor to researching the potential of other aspects of the SFL model to characterise both the nature of the narrative deficits and other aspects of the language performance of children with SLI. Whilst there was some inconclusiveness in the results from this research, a significant difference between the children with SLI and their typically developing peers was established for some aspects of theme realisation. This justifies some optimism for the application of SFL to describing the text-level problems associated with narrative production.

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Notes

1. Theme is underlined in examples.
2. Verified by parent in giving consent for his/her child to participate.
3. Another category ''Other'' included less frequently occurring patterns or themes.

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