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EMOTION EXPRESSIONS AND KNOWLEDGE OF STORY STRUCTURE: A STUDY OF MANDARIN-SPEAKING CHILDREN'S NARRATIVE DEVELOPMENT*

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ABSTRACT

The present study investigates developmental differences in Mandarin-speaking children's use of emotion expressions in narratives and their relatedness to the narrators' knowledge of story structure. Our data yield age-related differences in the use of emotion expressions. More importantly, the narrators' emotion expressions seem to respond to different hierarchical levels in the story structure. In particular, the five-year-olds' emotion expressions were mostly triggered by local, immediate situations. Most nine-year-olds' emotion expressions were motivated by local situations, while few of them considered both local and global story structure. The adults' attribution of emotion, however, was triggered by both local situations and the global story plotline, which served to enhance narrative coherence. In addition, the five-year-olds' attribution of emotion mostly focused on one character in the story, while the adults' attribution involved several characters, which suggests that the adults possess better ability in perspective-taking. Our data suggest that the use of emotion expressions may disclose narrators' knowledge of story structure and reflect their ability in maintaining narrative coherence. Findings are discussed in relation to the development of event schema, theory of mind and the Three-Phase Model for problem-solving.

Key words: emotion expression, frog story, global, local, narrative coherence

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1. INTRODUCTION

Narrative activities have long been of interest to researchers, as they provide rich information about children's development of discourse, literacy, and socialization abilities (Chang 2000, Miller et al. 1997, Snow 1991). Because of its importance, narrative discourse is also regarded as a major component of various language assessment tools (McCabe 1995, Schneider et al. 2006). Accordingly, a full account of children's language development should take into consideration their emerging ability in narration.

As a complex form of discourse, narratives consist of narrative clauses and evaluative clauses. The former help to orient hearers to whom a narrative is about and where and when actions take place. The latter reveal the attitude of the narrator and elaborate the significance of a narrative (Labov 1972). Extending Labov and Waletzky's (1967) narrative framework, researchers reframed the distinction between narrative and evaluative clauses as two distinct narrative orientations (Bamberg and Marchman 1990, Young 1987). According to these researchers, the former describes events along a horizontal/temporal axis, while the latter unveils the significance of events along a vertical/ hierarchical axis. In other words, narrative clauses are used to delineate events with regard to temporal order. The descriptions of mental states or other evaluations, however, move the discourse outside the referential context, and shift the focus from the actions in the narrative to the view of the narrator. As such, evaluative expressions not only provide links between sequential events, but, more significantly, enhance narrative coherence by focusing on the overall organization of the narrative and signaling the global hierarchical perspective. Although earlier studies provide considerable knowledge about narrative development pertaining to the referential aspect, the development of the evaluative aspect is comparatively much less understood.

Children's narratives bristle with evaluation (Peterson and McCabe 1983, Ukrainetz et al. 2005). Among various evaluative devices, the

importance of references to 'frames of mind (FOM),' or internal states, cannot be overemphasized.[1] These references include words reflecting story characters' physical states, intentions, thoughts, emotional motivations and reactions, which are the means narrators rely on to provide the 'landscape of consciousness' for narratives (Bruner 1986:14). While employing FOM references in fictional narratives, a narrator needs to adopt not only his/her own stance but also the perspective of a character in the world of the story (Chafe 1994). In other words, the narrator may need to go beyond him-/her-self to interpret the story character's internal states, such as emotions, attitudes or beliefs, so as to provide psychological motivations to account for the actions of the character.

A successful shift between the narrator's own stance and the story character's perspective requires mature perspective-taking ability. This cognitive capacity is closely related to a person's theory of mind, which involves the realization that just as I have feelings, desires and beliefs, so do other people. With this capacity, one can comprehend the mind in relation to human behavior, and thus establish connections between mental states and related behavior. As indicated by Tager-Flusberg and Sullivan (1995), a theory of mind is essential to narratives, for a successful narrator should encode narratives in a goal-oriented, problem-resolution structure and attempt to elaborate the psychological motivations or internal states of the characters in a story so as to account for their behaviors. In addition, a successful narrator must consider the

[1] In recent decades, several researchers have noticed the significance of evaluative elaboration in narratives. A variety of evaluative devices have thus been recognized and examined. Among these endeavors, Peterson and McCabe (1983) differentiate twenty-one types of evaluative devices; Miller and Sperry (1988) list five categories, including 'intensifier', 'qualifier', 'explicit reference to emotion', 'quoted speech', and 'comparator'; Bamberg and Damrad-Frye (1991) blend Labov and Waletzky's (1967) and Peterson and McCabe's categories and focus on the five most commonly-used ones, i.e., 'references to frames of mind', 'character speech', 'hedges', 'negative qualifiers' and 'causal connectors'; Ukrainetz and colleagues (2005) include five categories in their study: 'interesting modifier', 'expressions', 'repetition', 'dialogue', and 'internal state'. Though the categorization systems vary, the category of 'references to frame of mind' is established in each system, for this category is the most commonly-used device and is more likely to reveal significant developmental progression.

needs and perspectives of the listeners so as to meet the requirements for communication. Therefore, an investigation of the use of FOM references may not only widen our knowledge about narrative development but also shed light on the connection between language development and cognitive advancement.

Studies of English-speaking children have documented interesting developmental patterns for the use of FOM references. To begin with, Peterson and McCabe (1983) note that evaluative elaborations are present early in narrative development and detect qualitative differences in the use of evaluative devices as children develop. In particular, their data reveal that children of different ages tend to encode FOM references differently. That is, older children are more likely to provide references to moods and motivations; younger children may express them implicitly, while older children do so explicitly. Rather than noting qualitative differences, in another study, Kemper (1984) confirms an age-related increase in the frequency of FOM references in narratives from children aged five and six. Similar developmental progression is found in Ukrainetz and colleagues' (2005) investigation, in which an age-related increase in the variety of FOM references is shown. Other than for English-speaking children, Shiro (2003) investigated the evaluative stances in fictional narratives of Venezuelan children and detected an interaction between age and socioeconomic status. She notes that middle-class children tend to increase their evaluative elaboration with age. Such an age-related increase, however, is absent in children of a low socio-economic background. The evaluative device responsible for this interaction is FOM references.

Recent studies on the narrative development of Mandarin preschoolers have also detected an increasing trend to use FOM references over time (Chang 2000, Chang 2001). Particularly, in Chang's (2001) research, among the six categories examined, FOM elaboration is the only evaluative device progressing steadily in her data.[2] According to her, the use of FOM references is very effective in encouraging

[2] Chang (2001) investigates children's development of narrative structure and evaluative devices. She classifies evaluative devices into six categories: 'lexical', 'causal explanation', 'rhetorical', 'negative qualifier', 'direct speech', and 'reference to frame of mind'.

audience empathy and enhancing interpersonal relations. While mastering such expressions and their implications are critical to narrative development, this linguistic ability is interwoven with children's development in the ability of theory of mind and thus it takes a great amount of time to cultivate. Accordingly, Chang's and related studies consistently find that the frequency in the use of FOM references increases steadily with age.

Most of the earlier investigations of FOM references were mainly based on quantitative analyses, and do not provide qualitative analyses of the ways in which children employ such expressions. A more in-depth understanding of the development of FOM references is found in Bamberg and Damrad-Frye's study (1991) of evaluative expressions. In this investigation, Bamberg and Damrad-Frye detect quantitative as well as qualitative differences among subjects of different ages in the use of FOM references. According to them, among various evaluative devices, FOM references are especially preferred by older children. More importantly, they suggest a distinction in the use of FOM references between young children's local preference and adult narrators' global orientation. Despite the intriguing qualitative analyses, Bamberg and Damrad-Frye's study, however, covers various subtypes of FOM references, which leads us to speculate whether all of the subtypes demonstrate similar global and local distinctions.

In an investigation of Mandarin-speaking preschoolers' narrative development, Sah (2007) also notices young children's local preference in relating events. Similar local-global distinctions are displayed not only in narrative processing but also in other cognitive domains.[3] To extend this line of investigation about global and local distinction, we attempt to explore the connection between narrators' knowledge of story structure and their use of FOM references. Story structure consists of essential components of a story and their interrelationships.[4] Some researchers

[3] In the study on visual recognition, for instance, researchers suggest that there might be different preferences for attention to local and global properties of stimuli, and that there could be separate mechanisms for processing global information, local information and for integrating them (Davidoff et al. 2008, Thomas and Forde 2006).

[4] Varying with different research paradigms and purposes, a component may relate to a proposition, a clause or an episode.

approach structure in stories via high point analysis (Labov 1972). Other investigators describe stories as composed of episodes and examine story structure in terms of story grammars (Stein and Glenn 1979). Still others suggest that story structure is embodied in the characteristics rendering coherence, emphasizing an orderly flow of information (McCabe and Peterson 1991). In the present work, we consider story structure from both local and global aspects. As Bamberg and Marchman (1990) indicate, a narrator needs to establish a local relationship between propositions to construct a narrative, and to organize information about characters, events and activities into a globally coherent whole. Since our work is based on a picture book, the local aspect of constructing a narrative thus involves abstracting information from each individual picture, weaving together pieces of information from the bottom up and establishing the interrelationships between the details. On the other hand, the global aspect relates to a hierarchical organization of the story plotline and involves conceptual representation, through which narrators cluster pictures together to form the skeleton of the story.

As Bamberg and Damrad-Frye (1991) note, the distinction between local and global story structure may relate to the use of FOM references, which consists of elaboration about emotional, physical, or mental states. Previous studies of Mandarin-speaking children have addressed the development of FOM references; yet, the focus has been mainly on the use of mental verbs or desire terms (Chang 1998, Chien and Chou 2005, Tardif and Wellman 2000). Though Chou and Chang (2008) recently investigated FOM references in children's narratives, their focus is on the effect of joint book reading on children's mental states references. Much less, however, is known about the trend in the development of children's references to emotional states. As Bartsch and Wellman (1995) point out, the elaboration of a person's emotional states is essential in narration, for emotional reaction may serve to motivate one's desires, frame one's beliefs and shape one's behaviors. The present work thus aims to explore Mandarin children's development of references to emotional states by addressing the following research questions.

(i) How does the age effect manifest itself in children's use of FOM references in narratives?

(ii) How does the age effect manifest itself in children's use of emotion expressions?
(iii) Does narrators' use of emotion expressions relate to their knowledge of story structure?

2. METHOD

2.1 Subjects

Earlier studies show that five-year-olds and nine-year-olds display different abilities in constructing and connecting narrative events and in using FOM references (Bamberg and Damrad-Frye 1991, Berman and Slobin 1994, Sah 2006, 2007). Ukrainetz and colleagues (2005) notice that five-to-six-year-olds and seven-to-nine-year-olds are two age clusters displaying age effect in the development of evaluative expressions. Such age difference in narrative ability also gains support from research in developmental psychology. Among the prominent studies, Piaget's (1952) theory of cognitive development states that five-year-olds and nine-year-olds belong to different developmental stages: the former belong to the pre-operational stage, while the latter, the operational stage. To further assess the narrative abilities of children of these two age groups and to allow for viable comparisons with the findings of previous studies, we therefore chose five-year-olds and nine-year-olds as our subjects.[5]

Forty children and twenty college students (mean age: 19;5) served as subjects in this study. All the subjects were from similar middle-class socio-economic backgrounds. The children were divided into two age groups: twenty five-year-olds (mean age: 5;8) and twenty nine-year-olds (mean age: 9;6). They were all normally developing children, with no learning disabilities, or speech or hearing problems.

[5] Based on the developmental data from a variety of languages, investigators indicate that five- and six-year-olds can already produce well-ordered narratives (Bamberg and Damrad-Frye 1991, Peterson and McCabe 1983). Thus, we included five-year-olds as our youngest group with the assumption that they may be beginning to display ability in presenting extended narratives.

2.2 Material

The present work aims at assessing children's use of emotion expressions in fictional narratives.[6] To control the content of the narratives, we used a story book *Frog, where are you ?* (Mayer 1969) to elicit narrative production from the subjects. The story is about a boy and his quest to find his missing pet frog.[7] This book was chosen because it is wordless and its structure has been extensively analyzed (Bamberg 1987, Bamberg and Marchman 1990), and also because it is used worldwide as a research tool.

The frog story is a typical children's story with a hero, a problem, a series of actions following the problem, and a happy ending. Its content and context are age-appropriate to children. In addition, it depicts an elaborate series of events which allow narrators to provide various evaluations and to take different perspectives on events. Therefore, this book is suitable to our research goals.

2.3 Data Collection

Rapport with the subjects was first established in the observation period. The interviews were carried out individually with each subject, and consisted of an initial warm-up conversation followed by a narrative task based on *Frog, where are you?* The subjects were first asked to look through the entire book and then to tell a story while looking at the

[6] As Ukrainetz and colleagues (2005) suggest, fictional narratives have greater potentiality than personal experience narratives in terms of revealing narrative performance. Accordingly, fictional narratives are more commonly employed in assessment and classroom instruction.

[7] The scenario of the story is as follows: A boy has a pet dog and a pet frog. While the boy and his dog are sleeping one night, the frog gets out of the jar where it has been kept. When the boy wakes up the next morning, he finds that the jar is empty and realizes that the frog has gone. He decides to search for his frog, and begins his quest, first inside the bedroom, then outside the house. Together with the dog, the boy visits many places, including a hole in the ground, a hole in a tree, a rock, and a log. They encounter various obstacles, and finally find the missing frog with a mate and a clutch of baby frogs.

pictures. The entire interviews were audio-taped and subsequently transcribed.

2.4 Data Analysis

To compare our results with the findings of earlier studies, we adapted from previous research the definitions for FOM references and emotion expressions (Bamberg and Damrad-Frye 1991, Chang 2000, Chang 2001, Sah 2006). FOM references include references to physical states, emotional states, and purely mental states.[8] As a subtype of FOM references, the elaboration for emotional states are labeled as 'emotion expressions', focusing on emotional states such as *happy*, *sad*, *worried*, *anxious*, etc. Related examples are given below:

(1) FOM reference, physical state
xiao qingwa sihu you yi dian touyun
'The little frog seems to be a little dizzy.'

(2) FOM reference, mental state
ta xiangxin xiao qingwa hai zai fujin
'He believes that the little frog is still around.'

(3) FOM reference, mental state
wo yiwei na shi wo de qiu
'I thought it was my ball.'

(4) Emotion expression
xiao nanhai jiu hen shangxin
'The little boy is very sad.'

[8] To avoid ambiguity in classifying subcategories of FOM references, we followed Bamberg and Damrad-Frye's system. Thus, purely mental states (e.g., *think*, *believe*, *be interested in*, etc.) belong to one category, while emotional states (e.g., *sad*, *happy*, *worried*, *mad*, *amazed*, etc.) as well as emotional verbs (e.g., *scare*, *frighten*) are assigned to another category, labeled as 'emotion expressions'.

(5) Emotion expression
tamen feichang kuaile de huijia qu
'They go home very happily.'

In order to verify the accuracy of the transcriptions, a second trained examiner checked each transcript. Then, the transcriptions were independently coded by two examiners. Coding discrepancies were discussed and agreement between examiners was obtained on all transcripts.

After the transcribing and coding were done, both quantitative and qualitative analyses were performed to assess the ways our subjects used emotion expressions in narratives. We adopted the 'episodic structure' proposed by Bamberg and Marchman (1990) and particularly focused on Episodes 1, 2 and 7.[9] In Bamberg and Marchman's investigation, Episodes 1 and 7 are rated as the two most important sections for the understanding of the story, for they provide the setting and the resolution of the story, respectively. In its provision of setting or orientation for the story, Episode 1 includes essential elements like participants, time, location, and, more importantly, character relationships and motivating circumstances.[10] On the other hand, Episode 2 and Episode 7, signaling the initiation and the completion of the story, together constitute the frame which sustains the search motif of the story. In addition to its essential status in terms of story structure, Episode 2 is considered to be the most complex episode to narrate as the activities of the boy protagonist are intricately interwoven with and also distracted by those of the sub-protagonist, the dog. Given their salience in the frog story, these three episodes were chosen to be the focus of analysis in Bamberg and Damrad-Frye's exploration (1991) of children's evaluative

[9] Bamberg and Marchman (1990) rely on the task 'judgment of importance' to distinguish seven episodic sections in the frog story and label them as: prelude, Episodes 1 through 5, and completion. In the present work, we refer to all of them as episodes, instead of using 'prelude' or 'completion' section. Accordingly, our analyses relate to Episodes 1 through 7.

[10] 'Orientation' is defined as statements that provide the context of a narrative, including participants, time, location, general condition, etc., which is one essential part in high-point analysis (Labov and Waletzky 1967). It is considered as evaluative in Ukrainetz and colleagues' analysis (2005).

comments and in Berman and Slobin's (1994) investigation of narrative structure. Due to the limited scope of the present work and for the purpose of comparing results with previous findings, our analyses thus also focused on Episodes 1, 2 and 7.

3. RESULTS

3.1 Quantitative Findings

Since analyses regarding the use of emotional expressions were considered in relation to story length, the overall story length for each age group was first established. To this end, the number of clauses was used as an indication of story length. The mean number of clauses was 53.42 for the five-year-olds, 45.5 for the nine-year-olds and 68.75 for the adults. An ANOVA showed significant differences between the adults and the children's groups in this regard ($F(2,60)=7.28$, $p<.01$). No significant difference, however, was obtained between the five- and the nine-year-olds.

The first research question pertains to the developmental trajectory of the children's use of FOM references in terms of quantity. Previous studies on English-speaking children found an ascending trend in the use of FOM references, though the magnitude of the increase failed to reach significance (Bamberg and Damrad-Frye 1991, Peterson and McCabe 1983). Recent studies on Mandarin-speaking children have also detected an increasing trend in the use of such expressions over time (Chang 2000, Chang 2001, Sah 2006). Similarly, in the present study, an age-related increasing trend for total amount of FOM references emerges (Table 1). Furthermore, ANOVAs reveal a significant age main effect for density of FOM references ($F(2,60)= 44.97$, $p< .01$).[11] As shown in Figure 1, the adults produced the largest density of FOM references among all of the age groups; the five-year-olds, the least. Such differences between the subject groups are proved significant by post hoc analyses. The significant age main effect suggests that, along with the advances in

[11] The density of FOM references is based on the total amount of FOM references divided by the total number of clauses.

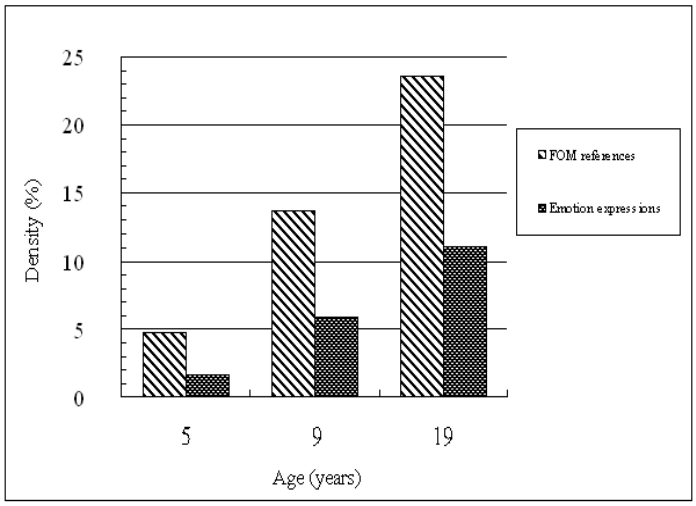
linguistic capacities, narrators tend to employ more FOM references with increasing years (Figure 1).

Table 1. Total numbers and density of FOM references and emotion expressions per age group

	FOM references		Emotion expressions	
Age	Total number	Density (STD*)	Total number	Density (STD)
5	58	0.48 (0.45)	18	0.16 (0.21)
9	118	0.14 (0.73)	50	0.59 (0.53)
19	326	0.24 (0.78)	154	0.11 (0.56)

*STD: Standard deviation

Figure 1. Density for FOM references and for emotion expressions per age group



Since our work focuses on the use of emotion expressions, the second research question addresses developmental trend of the use of such expressions. As illustrated in Table 1 and Figure 1, along with the increase in the use of FOM references, children were likely to employ more emotion expressions in their narratives over the years. An ANOVA yields an age main effect with respect to density of emotion expressions

($F(2,60)=24.2$, $p<.01$). Group differences are detected via a post hoc analysis, in that adults were significantly more likely than both of the children's groups to use emotion expressions and that significant differences existed between the five-year-olds and the nine-year-olds.

In addition to the increase in overall quantity of emotion expressions, an age-related ascending trend for variety in the use of such expressions is also evident. As shown in Table 2, adults used apparently a larger variety of emotion expressions than did the children's groups. An ANOVA detects age main effect for diversity of emotion expressions ($F(2,60)=33.1$, $p<.01$). Subsequent analyses reveal that the adults employed a significantly wider variety of emotion expressions than the children did, and that significant differences also existed between the five- and the nine-year-olds. To have adequate power to detect group differences related to diversity of emotion expressions, we also performed a nonparametric chi-square test. The statistical results again confirm significant differences among the subject groups, $\chi^2_{2(.95)} = 43.52$. Further scrutiny reveals subtle differences among the subject groups with respect to specific aspects of the emotions encoded. In particular, the five-year-olds' emotion expressions tended to cluster around limited aspects like *shengqi* 'mad' and *gaoxing* 'happy'. In addition to *shengqi* 'mad' and *gaoxing* 'happy', the nine-year-olds added more aspects of emotions such as *shangxin* 'sad' and *danxin* 'worried'. The adults not only used richer expressions to relate the above-mentioned aspects of emotions, but also covered a wider spectrum of emotions by extending to other aspects like *haipa* 'scared', *exin* 'nasty', and *jinzhang* 'nervous'. On inspection of the data, we note that, along with the increasing variety of emotion expressions at hand, narrators are more likely to ascribe a broader range of human feelings, to elaborate subtly different emotions and to enhance narrative coherence by linking the emotion attribution with related behavior of the story characters.

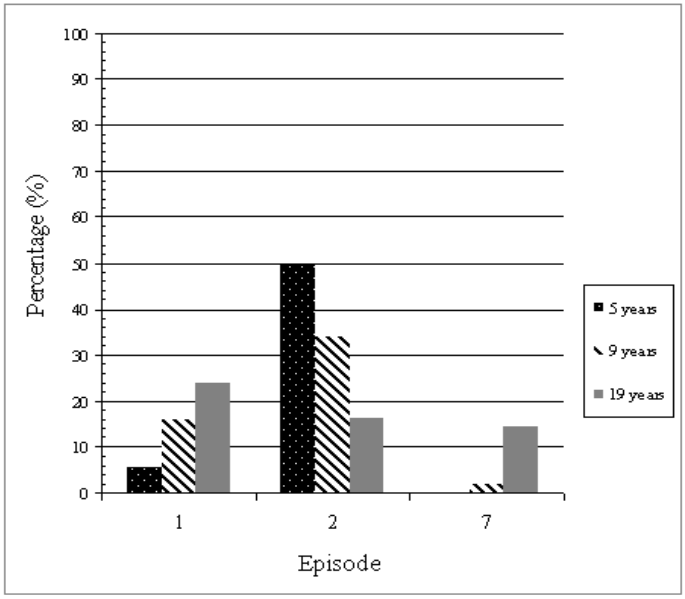
Table 2. Total numbers of types and group mean for emotion expressions per age group

Age	Number of types	Group mean (STD)
5	8	0.4 (0.91)
9	21	1.5 (1.94)
19	45	2.25 (2.66)

Table 3. Total numbers of emotion expressions and emotion ratio for selected episodes per age group

	Episode 1		Episode 2		Episode 7	
Age	Total number	Ratio	Total number	Ratio	Total number	Ratio
5	1	5.56	9	50	0	0
9	8	16	17	34	1	2
19	37	24.3	25	16.23	22	14.29

Figure 2. Total numbers of emotion expressions used for selected episodes per age group in per cent (relative to total number used per age group)



To address the third research question, the analyses focus on Episodes 1, 2 and 7. The consideration of these three episodes is threefold. First, as mentioned earlier, they are salient in terms of the structure of the story. Second, by focusing on them, we can compare our findings with results from earlier studies. Third, with regard to the frequency of the use of emotion expressions, our children used more emotion expressions for the second episode than for other episodes, while they employed apparently fewer emotion terms than did the adults for Episode 7.

On inspection of the data, we note a similar age-related increase in the number of emotion expressions used in the selected episodes. As shown in Table 3, the adults made markedly more attribution of emotion than did the children groups. If the analysis is based on the emotion ratio, however, different distributional patterns exhibit and provide interesting insights.[12]

Figure 2 illustrates the distributional patterns for the emotion ratios for the selected episodes. In Episode 1, an ascending trend shows that the adults employed the largest ratio among all of the age groups; the five-year-olds, the least. An ANOVA also reveals significant differences between the adults and the five-year-olds ($F(2, 43)=5.11$, $p<.01$). A reverse distribution pattern, however, is seen for Episode 2, in which the emotion ratio for the five-year-olds is significantly larger than that for the adults ($F(2, 43)=4.86$, $p<.01$). More interestingly, our data indicate that the emotion expressions used by the five-year-olds clustered most notably at Episode 2. An ANOVA on the emotion ratio for the five-year-olds for each of the different episodes shows a significant episode effect ($F(2, 20)=12.62$, $p<.01$). As the post-hoc analysis further reveals, the five-year-olds made significantly more attribution of emotion for Episode 2 than for the other two episodes. Compared with the distributional pattern for Episode 2, the pattern for Episode 7 manifests a sharp contrast. For this last episode, the five-year-olds failed to make any emotion attribution, while the adults employed more

[12] The emotion ratio per episode is derived by having the number of emotion expressions used by one particular age group for one episode divided by the overall number of emotion expressions used by that age group.

emotion attribution than did the children. As evidenced in the statistical results for Episode 7, the emotion attribution of the adults is significantly different from that found for the children's groups ($F(2, 43)=11.26$, $p<.01$). To sum up, the distribution patterns for the three episodes stated above appear to suggest that narrators of different ages tend to value different things while attributing emotions to story characters. More in-depth discussions will be provided below in terms of qualitative analyses.

3.2 Qualitative Findings

The third research question addresses the possible connection between children's use of emotion expressions and their knowledge of story structure. The assumption underlying our analyses is that emotion attribution may be motivated by elaboration pertaining to different levels of the story structure, i.e., local and global levels.

3.2.1 Episode 1

As shown in Figure 2, our five-year-olds attributed emotions to characters in the story far less than the nine-year-olds and adults**.** Examples 6 and 7 provide typical interpretations for this episode from the five-year-olds. These examples, seemingly picture-bound description, are juvenile-sounding texts with impoverished linguistic devices. Most of our five-year-olds, merely interpreted specifics in the immediate situation without attributing any emotion or motivations to the characters in the story and thus failed to establish the need for the subsequent search for the lost frog. Their restriction to specifics in the pictures leads us to speculate that they were within the bounds of local situations and were thus less likely to construct the story according to the global story plotline.

(6) KHC, five-year-old
1 you yizhi qingwa
'There is a frog.'

2 you yizhi gougou shenchuqu kan qingwa
‘A dog is looking at the frog.’
3 xiaohai ye you zai kan
‘The child is also looking at (the frog).’
4 qingwa shi chang jiao
‘The frog has long feet.’
5 yizhi shenchulai
‘(It) stretches one foot out of (the jar),’
6 shou pa dong chulai
‘(the) hands come out of the hole,’
7 ranhou jiu tiaochulai
‘then (it) jumps out.’

(7) LSC, five-year-old
1 congqian you yige xiao nanhai haiyou yizhi xiao gou
‘Once there is a little boy and a little dog.’
2 ta zai pingzi limian faxian le yizhi qingwa
‘He finds a frog in a jar.’
3 ta jiu shuijiao
‘He then sleeps.’
4 jieguo nazhi qingwa toutou de cong limian paochulai
‘But the frog sneaks out of the jar.’

The nine-year-olds’ interpretations for Episode 1 differed from those of the younger children by explicitly indicating the boy’s notice of the frog’s escape and by building up the connection between the empty jar and the boy’s cognizance. Nearly half of the nine-year-olds’ accounts of the boy’s affective reactions were encoded in adjectives like *shangxin* ‘sad’, *danxin* ‘worried’ and *shengqi* ‘mad’ etc., whereas only one five-year-old referred to the boy’s emotional state *shangxin* ‘sad’. Moreover, some nine-year-olds selected a more tightly packaged way to combine the frog’s disappearance and the boy’s internal responses, as shown in *xiao nanhai getian zaoshang qilai de shihou… faxian xiao qingwa bujian le. ta feichang shangxin* ‘When the little boy wakes up the next morning…, (he) realizes the little frog has gone. He is very sad’ (Example 8, line 6 through line 8), and *zaoshang qichuang xiao nanhai*

faxian qingwa bujian le. ta hen zhaoji ‘(When he) gets up in the morning, the little boy realizes the frog has gone. He is very worried’ (Example 9, line 5 and line 7). In Example 10, the child KTH made his interpretation more coherent by indicating that the frog was the boy’s ‘beloved’ pet (line 4), which highlighted the anxiety of the boy and signaled the importance of the ensuing search. Taken together, the explicit mention of the boy’s cognizance of the frog’s disappearance and the subsequent emotional responses provided motivations for the search throughout the rest of the story, which revealed that the nine-year-olds were likely to construct their story from a more global perspective.

(8) LCF, nine-year-old
1 congqian zai ke’ai senlinli zhu zhe yige xiao nanhai
‘Once upon a time in the lovely forest lives a little boy.’
2 …keneng Bulute ta feichang de xihuan qingwa
‘Maybe Brutt he likes frog very much.’
3 ta jiu yang le yizhi qingwa zai boliping limian
‘He keeps one frog in the jar.’
4 …danshi you yitian xiao qingwa zai Bulute shuizhao de shihou
‘But one day when Brutt is sleeping,
5 cong changhu liuchuqu lai
‘the little frog sneaks out the window.’
6 xiao nanhai getian zaoshang qilai de shihou yikan
‘When the little boy wakes up the next morning and takes a look (at the jar),’
7 faxian xiao qingwa bujian le
‘(he) realizes the little frog has gone.’
8 ta feichang shangxin
‘He is very sad.’

(9) LTC, nine-year-old
1 congqian you yige xiao nanhai
‘Once upon a time there was a little boy.’
2 ta zai hubian zhuadao le yizhi qingwa
‘He catches a frog beside the lake.’

3 ta ba ta fang zai yige pingzi li
‘He puts it in a jar.’
4 dao banyie de shihou ta pa le chulai
‘At midnight it climbs out of (the jar).’
5 zaoshang qichuang
‘(When he) gets up in the morning,’
6 xiao nanhai faxian qingwa bujian le
‘the little boy realizes the frog has gone.’
7 ta hen zhaoji
‘He is very worried.’

(10) KTH, nine-year-old
1 you yitian xiao nanhai shui de hunhun de shihou
‘One day when the little boy is sleeping,’
2 qingwa turan cong guanzili tiaochulai le
‘the frog suddenly jumps out of the jar.’
3 xiao nanhai yicao qilai
‘When the little boy wakes up in the morning,’
4 faxian ta xinai de qingwa bujian le
‘he realizes his beloved frog has gone.’
5 jiu yizhi hou zhe hen danxin
‘He then shouts and is very worried.’

Compared with the children, the adults apparently produced more mature interpretations for this beginning episode. The nine-year-olds’ emotion expressions mainly focused on Picture 3 of Episode 1; however, the adults’ references to emotional states were distributed equally between Pictures 1 and 3. In addition to sadness or worry encoded for Picture 3, the adults referred to characters’ internal states in Picture 1. A good illustration of this is Example 11, in which the narrator not only mentioned positive emotions for Picture 1 but also encoded negative emotions for Picture 3: *yukuai* ‘happily’ (line 2), and *kuaile* ‘happy’ (line 4) for Picture 1; *jinzhang* ‘nervous’ and *nanguo* ‘sad’ (line 13) for Picture 3.

More interestingly, the adults encoded inner states for not only the boy, but also for the dog and the frog. As shown in Examples 11 and 13:

qingwa feichang kuaile. *gougou ye hen xihuan gen qingwa wan* 'The frog is very happy. The doggie likes to play with the frog, too' (Example 11, lines 4 and 5); *yong zhe han ta zhuren yiyang de taidu kan zhe nazhi qingwa, qingwa sihu bu tai jinzhang ne* 'The dog looks at that frog with the same attitude as his owner. The frog doesn't seem too nervous' (Example 13, line 5 and line 6). Such attribution reveals adults' capacity to interpret a narrative from various perspectives.

Shifts in perspective not only enhance narrative coherence but also add flavor to the elaboration of the story. As shown in Example 11, the adult HCH shifted from the perspective of the boy protagonist to that of the frog's, and he not only referred to the frog's emotional state: *qingwa feichang kuaile* 'The frog is very happy' (line 4), but also modified its happiness to rationalize the subsequent runaway: *qingwa zheshihou juede feichang de kaixin, ta juede hao bang, zhongyu keyi ziyou le* 'at this moment the frog feels very happy. It thinks it's great that it can finally get freedom' (lines 7 and 8). Such plot-motivating description successfully enhances the coherence of this episode; however, it is rarely found in younger children's narratives. Similarly, in Example 12, by explicitly pointing out the frog's inner state, the narrator provided a clausal link for this episode and the ensuing search motif: *nazhi xiao qingwa shoubuliao xiazai de kongjian, jiu pao le chulai* 'that little frog can't tolerate the narrow space anymore, so it ran out' (lines 3 and 4). This attribution of mental state not only provides a sound explanation for the following developments but also helps to enhance the coherence of this episode. A more interesting illustration is Example 13, in which the shifts in perspective also help enrich the elaboration of the story. Here, WWT shifted the focus to the frog, from whose perspective the happy state of the boy was encoded: *congming de xiao qingwa kandao shoushui de xiao danni haizai kuaile de dahu zhe*. *ranhou ta jiu manman di zou le chulai* 'The smart little frog sees little Danny still snoring happily. It then walks out slowly' (lines 9 and 10). Such contentment and tranquility is in sharp contrast with the dog's concern and anxiety following the discovery of the frog's escape: *gougou ye sihu youdian jinzhang you yidian huangkong* 'The doggie also seems a little nervous and a little worried' (line 15).

In Bamberg and Damrad-Frye's study (1991), they note that, in

Episode 1 of the frog story, the five-year-olds use more FOM references than the adult subjects do. In the present work, however, a reverse pattern for emotion expressions emerges. That is, our five-year-olds were less likely to interpret the boy as having emotions, while nearly one third of the nine-year-olds attributed emotions to the boy at the end of this episode, and the adults employed the largest amount of emotion attribution**,** which served to establish the need for the subsequent search.

The discrepancies in research results obtained here are explicable. To begin with, Bamberg and Damrad-Frye's work analyzes FOM references as a general category, while our analysis focuses on 'emotion expressions', a subtype of FOM references. The discrepancies thus likely resulted from the different focus of analysis in the research. Second, Bamberg and Damrad-Frye note that their five-year-olds tended to employ locally-triggered FOM references, particularly in encoding facial expressions, in contrast with adults' globally-triggered ones. Though our five-year-olds are also locally-oriented, their local-orientation manifests itself in describing each picture as an individual event rather than in encoding facial expressions. Third, though different patterns for local-orientation exhibit, the subjects included in both studies are limited.[13] The different patterns may relate to preschoolers' different experience in narrative exposure, or their different preference in perceiving printed pictures.[14] Or, it may be simply ascribable to individual differences. It would be hasty if the different embodiment of local-orientation detected here were to be used as evidence to substantiate cross-linguistic or cross-cultural differences between English-speaking children and Mandarin-speaking children. A more representative subject population and more in-depth exploration are thus needed to clarify this interesting contrast. Fourth, adults in both studies set up their interpretation from a global standpoint of the story structure, which made their emotion attribution evenly distributed and thus enhanced the coherence of the episode. In addition to that, the adults in the present work manage to narrate the first episode from the

[13] Bamberg and Damrad-Frye included 12 five-year-olds in their work; 20 five-year-olds were included in the present work.

[14] Perhaps the facial expressions of the characters in these pictures are not salient enough to trigger an attribution of emotion from our five-year-olds.

perspectives of different characters and thus are able to encode a variety of emotional states. The evenly-distributed emotion attribution and multi-perspective interpretation provide a plausible explanation for the greater number of emotion expressions employed by our adults than by the five-year-olds for Episode 1. In spite of the above-mentioned discrepancies, our data reveal that an ability to shift perspectives is closely related to the emotion attribution and is essential for constructing a coherent narrative, of which the adults' elaboration provides a good illustration.

(11) HCH, adult

1 ta you yang le yizhi gou haiyou qingwa
'He has a dog and a frog.'
2 ta gen ta de liangge xiao dongwu dou guo de feichang yukuai
'He and his two little animals all live very happily.'
3 ta xihuan guanshang zai ta ba ta zhuang zai pingguanli de qingwa
'He likes to observe the frog that he puts in the jar.'
4 qingwa feichang kuaile
'The frog is very happy.'
5 gougou ye hen xihuan gen qingwa wan
'The doggie likes to play with the frog, too.'
6 you yitian ne nanhai ta shuizhao le
'One day the boy falls asleep.'
7 … ranhou qingwa zheshihou juede feichang de kaixin
'Then at this moment the frog feels very happy.'
8 ta juede hao bang zhongyu keyi ziyou le
'It thinks it's great that it can finally be free.'
9 ta jiu toutou de ba youjiao shenchu le pingguan
'It then quietly stretches (its) right foot out of the jar,'
10 ranhou jiu liucou le
'then (it) runs away.'
11 daole getian caoshang de shihou xiao nanhai jiu huran xingguolai
'The next morning, the little boy suddenly wakes up.'
12 ta gen ta de gougou jiu faxian qiguai qingwa bujian le
'He and his dog then realize that the frog has gone.'

13 ta jiu feichang de jinzhang feichang de nanguo
‘He then becomes very nervous, very sad.’

(12) SIW, adult
1 you yitian yige xiao nanhai zhuadao le yizhi qingwa
‘One day a little boy catches a frog.’
2 hen gaoxing de ba ta zhuang zai yige guanzi litou
‘(he) puts the frog into jar happily.’
3 ... zai yeshenrenjin de shihou nazhi xiao qingwa shoubuliao xiazai de kongjian
‘In the still of night that little frog can’t tolerate the narrow space anymore,’
4 jiu pao le chulai
‘so it ran out.’
5 xiao nanhai han nazhi xiao huang gou haishi hen anwen de shui zai tamen de chuangzhang
‘The little boy and that little yellow dog still sleep on their bed.’
6 getian caoshang xinglai faxian xiao qingwa bujian le
‘Next morning when they wake up, they find that the little frog is gone.’
7 xiao nanhai han xiao huang gou dou youxie zhaoji
‘Both the little boy and the little dog are a little worried.’

(13) WWT, adult
1 yitian wanshang danni han ta de xiao gougou faxian le yizhi hen hao hen hao de qingwa
‘One night, Danny and his little doggie find a very very good frog.’
2 ta jueding pa ta zhuadao pingzi limian
‘He decides to put it in the jar.’
3 natian wanshang danni yong taozui de yianshen kan zhe ke’ai de xiao qingwa
‘At that night, Danny intoxicatedly looks at the cute little frog.’
4 gougou huang zhe ta de xiao yiba
‘The doggie is swinging his little tail,’
5 yong zhe han ta zhuren yiyang de taidu kan zhe nazhi qingwa
‘looking at that frog with the same attitude as his owner.’

6 qingwa sihu bu tai jinzhang ne
'The frog doesn't seem too nervous.'
7 shenchen de ye laidao
'Here comes the dark night,'
8 xiao danni han ta de gougou zai chuangshang chenchen di shuiqu le
'Little Danny and his doggie fall asleep on their bed.'
9 congming de xiao qingwa kandao shoushui de xiao danni haizai kuaile de dahu zhe
'The smart little frog sees little Danny is still snoring happily.'
10 ranhou ta jiu manman di zou le chulai
'It then moves out (of the jar) slowly.'
11 qingwa jiu zheyang bujian le
'The frog is then gone.'
12 getian caoshang xinglai
'The next morning (little Danny) wakes up,'
13 …ranhou xinglai kan zhe ta zui qidai de pingzi
'then (he) wakes up and looks at his most anticipated jar.'
14 qingwa bujian le
'The frog is gone'
15 gougou ye sihu youdian jinzhang you yidian huangkong
'The doggie also seems a little nervous and a little worried.'

3.2.2 Episode 2

In Bamberg and Damrad-Frye's (1991) study, Episode 2 triggers almost half of five-year-olds' FOM references, while the same episode interests the older children to a lesser degree. A similar pattern for the use of emotion expressions is also found in the present work. For Episode 2, we detect a larger ratio of emotion expressions from the five-year-olds compared with the other two age groups.

Picture 7 of this episode was given special attention in previous studies as it motivates a great number of FOM references from younger children (Bamberg and Damrad-Frye 1991). For this picture, Examples 14 and 15 represent typical responses from our five-year-olds and nine-year-olds. Here the emotion expressions were triggered by local specifics and thus mainly focused on the boy's facial expression in

response to the immediately precipitating situation. Accordingly, most children encoded this picture by merely relating the boy's negative emotions: *nage xiao nanhai jiu hen shengqi hen shengqi zhaoji* 'That boy is very very angry and worried' (Example 14, line 3); *xiao nanhai hen shengqi* 'The little boy is very angry' (Example 15, line 3).

Although some adults also attributed negative emotions to the boy or the dog, they tended to mitigate this earlier mentioned negative emotion by giving additional elaboration so as to render the following search viable, as shown in Example 16: *yushi xiaojie jiu hen shengqi di ma ta. dan zhexie dou buneng zuzhi tamen qu zhao doudou* 'So Xiaojie is very angry and yells at it. But none of these can stop them from looking for Doudou' (lines 2 and 3). Others even neglected the obviously negative facial expression by providing an overall positive evaluation of the situation, as revealed in Examples 17 and 18: *haihao xiao gou meiyou shoushang* 'the good thing is that the little dog does not get hurt' (Example 17, line 2); *wo hen pa ta shoushang. keshi xinghao meiyou* 'I am so worried that it may get hurt. But fortunately it is fine' (Example 18, lines 5 and 6).

As stated by Bamberg and Damrad-Frye, in response to Picture 7, younger narrators seem to restrict themselves to the negative emotion of anger, which is closely tied to the pictorial information or the immediate situation and thus reveals a locally triggered perspective. On the other hand, adults are likely to consider the boy's anger against the dog to be an obstacle to the search for the lost pet frog. As a result, they, as more competent narrators, tend to overrule the negative emotion by giving additional information to mitigate it or to merely encode a positive evaluation, both of which help to establish links between this episode and the ensuing events, and thus successfully enhance the coherence of the whole narrative. In other word, adults' elaboration of this picture not only reflects their awareness of the overall story plotline but also displays their ability in achieving narrative coherence via a globally motivated perspective.

(14) LTC, five-year-old
1 ba pingzi shuaipo le
'The jar has broken.'

2 ranhou shuaipo zhihou ne
‘Then, after it is broken,’
3 nage xiao nanhai jiu hen shengqi hen shengqi zhaoji
‘that little boy is very, very angry and worried.’
4 ranhou ta ting shengyin dou bu jianghua
‘Then he does not utter a word even when he hears the sound.’

(15) CY, nine-year-old
1 ranhou xiao nanhai jiu hen danxin
‘Then the little boy is very worried.’
2 xiao nanhai jiu gankuai paoxiaqu ba xiao gougou baoqilai
‘The little boy then hurries down to hold the little dog.’
3 xiao nanhai hen shengqi
‘The little boy is very angry.’

(16) CTE, adult
1 yinwei wangwang de wanpi ba xiao doudou de guanzi gei shuaipo le
‘Because of Wangwang’s misbehavior, the jar is broken.’
2 yushi xiaojie jiu hen shengqi di ma ta
‘So Xiaojie is very angry and yells at it.’
3 dan zhexie dou buneng zuzhi tamen qu zhao doudou
‘But none of these can stop them from looking for Doudou.’

(17) OWR, adult
1 suiren ba boliping dapo le
‘Though it broke the jar,’
2 danshi haihao xiao gou meiyou shoushang
‘but the good thing is that the little dog does not get hurt.’

(18) WHJ, adult
1 lian boliping ye shuaipo le
‘Even the jar is broken too.’
2 wo gankuai chuqu bao zhe ta
‘I hurry out and hug it,’

3 ranhou bang ta huhuhei
‘then help it ease the pain.’
4 kezhi boliping podiao
‘But the jar is broken.’
5 wo hen pa ta shoushang
‘I am so worried that it may get hurt.’
6 keshi xinghao meiyou
‘But fortunately it is fine.’

3.2.3 Episode 7

The above explanation also applies to the way emotion expressions are used for Episode 7. As the concluding part of the story, this episode delineates a happy ending with the recovery of the lost frog as well as the discovery of other frogs. References to positive emotions like ‘happiness’ in this situation thus require knowledge about the overall plotline of the story. Most five-year-olds, however, failed to encode a positive emotion for this sequence. Examples 19 and 20 are typical interpretations from the five-year-olds, in which neither positive nor negative emotion expressions were used. Instead of providing resolution to the search motif by stating the recovery of the lost frog, CY and LPC ended the story with merely picture depiction: *xiao nanhai de shoushang fang zhe yizhi qingwa* ‘There is one frog in the little boy’s hand’ (Example 19, line 4); *ranhou ta jiu naqi yizhi xiao qingwa* ‘Then he takes one little frog’ (Example 20, line 3).

Compared with the five-year-olds, the nine-year-olds provided clearer elaboration by specifying the discovery of the lost frog or the substitution of the original frog with another frog. As shown in Example 21, the nine-year-old CHY stated the discovery of the frog: *tamen jiu zhaodao nazhi qingwa le* ‘Therefore they have found that frog’ (line 3). In Example 22, a more elaborate interpretation, in addition to describing the discovery, the child KHC created an extension relating to the frog’s disappearance: *ta jiu kandao ta yang de qingwa han lingwai yizhi mu qingwa jiehun le. ranhou sheng le jiuzhi xiao qingwa* ‘He then sees his frog married another female frog. Then (they) have nine little frogs’ (lines 3 and 4). In Example 23, the child CRS delineated the outcome of

the story (lines 4 and 5), though he failed to explicitly specify the resolution as either recovering the lost frog or having a substitution for it. Interestingly, CRS added at the end of his narrative the motivation for the frog's runaway: *diao de na yizhi jiushi tamen de xiaohai. yinwei ta xiang huiqu zhao ta de jiaren* 'The lost pet frog is their child. Because it wants to go back to its family' (lines 6 and 7). Such extension reveals that the child sought to construct the information of the story into a coherent whole by providing a causal elaboration for the behavior of the story character.[15] In general, though the nine-year-olds' interpretations are more coherent than the five-year-olds' in terms of including a resolution of the plot, they failed to include enough emotional responses. This failure in providing expressive elaboration rendered the children unable to provide a proper evaluation to the outcome of the frog-searching theme.

More mature and complex elaboration for Episode 7 was embodied in the adults' interpretation. Over 90% of the adults delineated the last episode with an evaluation of a happy ending. As shown in Examples 24 and 25: *ta jiu zheyang hen kuaile de huidao le jiazhong* 'He then happily goes back home' (Example 24, line 7); *na xiao nanhai jiu gen ta de xiao qingwa haiyou ta de gougou congci jiu guo zhe xingfu kuaile de rizi le* 'That little boy, his little frog and his doggie live a happy life ever after' (Example 25, line 18). Earlier studies indicate that the way that a narrator encodes the information of a narrative reflect his/her knowledge about story structures (Bamberg 1987, Hemphill et al. 1991). The attribution of positive emotion from our adult subjects may thus reveal their understanding about the global, hierarchical organization of the story.

Example 25 merits special attention for it not only includes the boy's earlier assumption: *ta yiwei xiao qingwa zhiyou ziji yige ren, cai xiangshuo yao dai ta huiqu gen ta yiqi zhu* 'He guesses the little frog has no one but itself, so he wants to have it back and stay with it' (lines 6 and 7), but also specifies his change of heart: *danshi mei xiangdao xiao qingwa zai zheli jingran you yige jiating ne* 'Yet he can never imagine

[15] Providing causal connections between story events is considered one essential way to achieve narrative coherence (Diehl et al. 2006, Karmiloff-Smith 1985, Trabasso and Sperry 1985).

that the little frog has a family here' (line 8). Furthermore, the narrator delineates how the boy persuaded the frog to spare him a baby frog (line 9 through line 16), by especially pointing out that the frog's current condition was 'lucky' and '(you) have so many babies' (lines 10 and 11) and by providing a sound reason for the boy to keep a pet frog: *gougou youdian fan* 'Doggie is troublesome sometimes' (line 15). All of these efforts reveal a rich attribution of mental states and reflect the maturity of adults in their ability to take different perspectives. This example also displays the adult narrator's effort in constructing a coherent narrative by including mental attribution and causal explanation.

Another interesting feature of adults' interpretation is that, despite a rich variety of expressive or rhetorical options at their command, 60% of the adults embedded their emotion attribution regarding the recovery of the lost frog in a conventional way, as often found in fairytales: *song ta yizhi baobei gei ta dang ta de chongwu. Na xiao nanhai jiu gen ta de xiao qingwa haiyou ta de gougou, congci jiu guo zhe xingfu kuaile de rizi* '(It) gives him one of its babies as his pet. That little boy, his little frog and his doggie live a happy life ever after' (Example 25, lines 17 and 18). In contrast, such stereotyped endings are found much less frequently in children's interpretations. Such discrepancy may be related to the differences in adults' and children's formal schooling experience and their exposure to narrative activities in classroom study and home reading.

To sum up, our qualitative analyses suggest that narrators of different ages tend to respond to different levels of story organization while attributing emotional states. The five-year-olds' emotion expressions were mostly triggered by local specifics or immediate situations, like the negative emotions employed in Episode 2. In contrast, the adult narrators employed more globally-motivated emotion expressions, such as the positive feeling in Episode 7, and they tended to ignore some of the local specifics for the sake of thematic coherence, as illustrated in their elaboration for Episode 2. The nine-year-olds, however, were somewhere in the middle for they were not consistently capable of encoding globally-triggered emotion expressions. Like the five-year-olds, these school-aged children restricted to the local specifics in Episode 2 and failed to end the story coherently by referring to the characters' internal

states in Episode 7. On the other hand, like the adults, they adhered to the significance of the plot-advancing event in Episode 1 by explicitly relating the boy protagonist's affective reaction to the disappearance of the frog.

(19) CY, five-year-old
1 padao shuganshang
'(They) climb onto the log.'
2 zai shugan kandao liangzhi qingwa
'From the log (they) see two frogs.'
3 yidui de qingwa dou zai ta pangbian
'One pair of frogs is beside him.'
4 xiao nanhai de shoushang fang zhe yizhi qingwa
'There is one frog in the little boy's hand.'
5 ranhou haiyou yizhi qingwa duo zai shugan pangbian change
'Then there is one frog hiding beside the log and singing.'

(20) LPC, five-year-old
1 xiao nanhai jiu padao lingwai yibian qu
'The little boy climbs cross (the hole) to the other side.'
2 ta kandao liangzhi xiao qingwa
'He sees two little frogs.'
3 ranhou ta jiu naqi yizhi xiao qingwa
'Then he takes one little frog.'

(21) CHY, nine-year-old
1 tamen pashang an de shihou jiu kandao liangzhi qingwa
'When they reach the shore they see two frogs.'
2 tamen juede na liangzhi qingwa yinggai you qizhong yizhi shi tamenjia de
'They think one of the frogs should be theirs.'
3 yushi tamen jiu zhaodao nazhi qingwa le
'Therefore they have found that frog.'
4 tamen jiu gen naxie qingwa baibai jiu huijia le
'They then say goodbye to those frogs and go back home.'

(22) KHC, nine-year-old
1 ta paguoqu
'He climbs over.'
2 ranhou ta jiu kandao qingwa
'Then he sees the frog.'
3 ta jiu kandao ta yang de qingwa han lingwai yizhi mu qingwa jiehun le
'He then sees his frog married another female frog.'
4 ranhou sheng le jiuzhi xiao qingwa
'Then (they) had nine little frogs.'
5 ranhou ta daizou le yizhi xiao qingwa gen qingwa jiazu shuo baibai
'Then he takes away one little frog and then says goodbye to the frog family.'

(23) CRS, nine-year-old
1 tamen liangge jiu kan tamen nage dongxi de houmian shi shemo dongxi
'They both take a look at what is behind that thing.'
2 jieguo shi liangzhi qingwa
'There are two frogs.'
3 qiguai na caocong zhebian you you hen duo zhi qingwa
'Strange enough, there are many frogs by the bushes.'
4 zhege huaidan jiu shuo ni ke bu keyi ba nazhi qingwa gei women ma
'The bad boy says: can you give that frog to us?'
5 …ranhou tamen jiu gen ta shuo baibai
'…Then they say goodbye to it.'
6 diao de na yizhi jiushi tamen de xiaohai
'The lost pet frog is their child.'
7 yinwei ta xiang huiqu zhao ta de jiaren
'Because it wants to go back to its family.'

(24) CMH, adult
1 ta paguo le pangbian de shugan
'He climbs over the log nearby.'

2 faxian ta de qingwa zheng gen qingwa taitai hen xiang'ai de yikao zai yiqi ne
'(He) finds that his frog lovingly leans against its wife.'
3 ta hen kaixin de pa le guoqu
'He moves over there happily.'
4 kandao le hen duo hen duo de xiao qingwa weirao zai tamen shenbian
'(He) finds many many little frogs around them.'
5 ta feichang de kaixin
'He is very happy.'
6 bingqie gen qingwa taitai yao le yizhi xiao qingwa dai huijia yang
'And (he) ask Mrs. Frog for a little frog so he can bring it home and keep it.'
7 ta jiu zheyang hen kuaile de huidao le jiazhong
'He then happily goes back home.'

(25) LWC, adult
1 ta zuanguo le yigen dada de zhugan
'He climbs over a huge log.'
2 yikan
'(He) takes a look at that.'
3 wa yuanlai xiao qingwa zai zheli gen ta de nüpengyou
'Wow, the little frog is here with its girl friend.'
4 pangbian haiyou hao duo hao duo xiao qingwa ne
'There are also a lot of little frogs around.'
5 ta hao kaixin hao kaixin
'He is so, so happy.'
6 ta yiwei xiao qingwa zhiyou ziji yige ren
'He guesses the little frog has no one but itself,'
7 cai xiangshuo yao dai ta huiqu gen ta yiqi zhu
'so he wants to have it back and stay with it.'
8 danshi mei xiangdao xiao qingwa zai zheli jingran you yige jiating ne
'Yet he can never imagine that the little frog has a family here.'
9 ta jiu gaosu xiao qingwa shuo
'He then says to the little frog,'

10 xiao qingwa jiran ni sheme xingfu
‘Little frog, since you are so lucky,’
11 erqie ni haiyou zheme duo *baby*
‘and you have so many babies.’
12 ni keyi song wo yizhi ma
‘Can you give me one (frog)?’
13 yinwei wo ye xiangyao gen qingwa haohao de guo xia yi xiabanbeizi
‘Because I also want to stay with the frog for the rest of my life.’
14 wo buyao zhiyao gen gougou
‘I do not want to keep only one dog.’
15 gougou youdian fan
‘Doggie is troublesome sometimes.’
16 yushi zhege xiao qingwa jiu daying ta
‘As a result, this little frog agrees.’
17 song ta yizhi baobei gei ta dang ta de chongwu
‘(It) gives him one of its babies as his pet.’
18 na xiao nanhai jiu gen ta de xiao qingwa haiyou ta de gougou congci jiu guo zhe xingfu kuaile de rizi le
‘That little boy, his little frog and his doggie live a happy life ever after.’

4. DISCUSSION

As Bliss and her colleagues (1998) indicate, a fully coherent narrative must be complete, and should contain three basic components: description, action and evaluation. Recent researchers not only value the first two parts, but also highlight the significance of evaluation in narrative production, for without evaluation, narratives will be uninteresting and not engaging. Among various evaluative devices, the importance of FOM references has gained much attention. To investigate the development of the use of such a device in children’s narratives, the present work focuses on the use of emotion expressions and integrates a qualitative and quantitative approach to the exploration of (1) the age effect on the developmental use of emotion expressions, and (2) the

connection between narrators' use of emotion expressions and their knowledge of story structure.

Quantitatively, our data yield age-related differences for the density and variety of emotion expressions. This increase in the density and variety for emotion expressions is largely in keeping with previous findings about narrative development. This developmental progression reveals that, with advancement in linguistic and cognitive capacities, children are more likely to include emotion attribution in their narratives, and to be more capable in inferring others' internal states (Bamberg and Damrad-Frye 1991, Chang 2000, Chang 2001, Peterson and McCabe 1983, Ukrainetz et al. 2005).

Though the increasing trend in the use of emotion expressions is established, our qualitative analyses suggest different preferences toward locally-motivated emotion expressions and globally-triggered ones at different developmental stages. More specifically, the five-year-olds' emotion attribution was mostly triggered by local situations. Most nine-year-olds' emotion expressions were motivated by local situations, while few of them considered both local and global aspects of the story structure. The adults, however, took into consideration both local details and the overall thematic structure while attributing emotional states. And their emotion attribution was more likely to signal the overall hierarchical organization of the story.

If narrative construction is treated as a problem-solving process, the developmental progress in employing emotion expressions detected here might be explicable in terms of Karmiloff-Smith's (1984) Three Phase Model.[16] In this process-oriented theoretical model, the first phase is one in which the data-driven process is emphasized and only details in local situations are valued. The second phase is one in which top-down processes are predominant and bottom-up specifics are mostly omitted. The third phase shows a balance in the interaction between the locally data-driven process and the globally top-down process.[17] In terms of

[16] Through an inspection of the development of a variety of cognitive abilities, including the use of principles in physics, the drawing of spatial circuits, the use of cohesive devices for storytelling and the reading of maps, Karmiloff-Smith (1984) proposes a Three Phase Model for problem-solving, which she believes applies to many domains.

[17] According to Karmiloff-Smith (1984), the first phase of the Three Phase Model is the

references to the emotional states of the story characters, the five-year-olds in the present study are still at Phase 1 for their elaboration is mainly motivated by local specifics. In contrast, the adults, presumably at Phase 3, value both bottom-up specifics and top-down overall organization. Our data show that they may overrule pictorial, local information by encoding global evaluation, or mitigate the locally-triggered emotion expressions to adhere to global, thematic coherence, which exemplifies the interaction between locally- and globally-oriented processes.[18] The data of our nine-year-olds, however, does not quite match the characteristics of Phase 2. Instead of being solely dominated by top-down processes, these school-aged children display reliance on local details. Even so, they show developmental advancement for they appear to attend to the global aspect of the story structure by relating motivations to the behaviors of story characters.

One plausible explanation for children's restriction to locally-driven emotion expressions may relate to the formation of event schemas. The development of event schemas involves differentiation and hierarchical integration; that is, the employment of mature event schemas requires the ability to decontextualize individual events and then to rearrange and integrate them into a more coherent, hierarchical order (Fivush and Slackman 1986, Slackman et al. 1986). As Bamberg and Damrad-Frye (1991) indicate, the ability to employ evaluative comments is closely related to the development of event schema. Our five-year-olds are presumably at an earlier developmental stage for the employment of

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'procedural phase,' which is characterized as an external data-driven process. The representations generated at this phase are independently stored. The second phase is termed the 'metaprocedural phase.' The linguistic or behavioral output at this phase is predominantly the product of top-down control. Since the overall organization may dominate the generated representations, the output of Phase 2 tends to ignore the elaboration of detail. Also due to the precedence of overall organization, the previously isolated procedures may be integrated into a single representational framework. The third phase is called the 'conceptual phase,' in which neither the data-driven nor the top-down process predominates, but a balanced interaction between processes is reached.

[18] A similar local-global distinction is also established in the study of Mandarin children's development of relating narrative events (Sah 2007). In addition to such distinction, a trade-off between hierarchical organization of global plotline and the descriptive details of the local event is detected.

event schema, and thus they mainly focus on individual events. As a result, their emotion expressions are mostly related to local details. The nine-year-olds are comparatively more advanced along this developmental continuum. Though their attribution of emotion is mostly locally-driven, they are beginning to respond to the global framework of the story, which seems to suggest that these school-aged children are shifting towards a higher-order hierarchical structure while constructing the story.

As noted previously, narrators' emotion attribution may be motivated by different perspectives and hence respond to different hierarchical levels of the story structure. According to Bamberg (1987), evaluative comments can not only connect sequential events, but, more significantly, they can enhance narrative coherence by focusing on the global organization of the narrative and signaling the global hierarchical perspective. The prevalence of globally-triggered emotion attribution in the narratives of the adults, therefore, may reveal their prior concern in achieving thematic coherence. Our younger children differ from the older children and the adults markedly in the ability to maintain narrative coherence. The advantage of the latter two groups in this narrative skill may be ascribed to their extensive experience of school instruction and narrative activity. More importantly, it closely relates to their advanced cognitive capacity which enables them to carry out causal reasoning and to integrate information. As Diehl and colleagues (2006) state, to achieve narrative coherence, a narrator needs to build up causal connectedness and construct a global representation of story meaning. The progress from the absence of globally-triggered emotion attribution by the five-year-olds, to the emergence of such elaboration by the nine-year-olds, and finally to the predominance of globally-oriented attribution by the adults seems to reflect a growing awareness of the significance of narrative coherence. In other words, since the use of evaluative comments is one essential way to enhance narrative coherence, the attribution of emotional states may not only reflect the narrators' knowledge about the hierarchical organization of the story, but also reveal their ability in maintaining narrative coherence.

Given that people's understanding of other minds may partly grow out of experience with narrative discourse, researchers consider narrative

discourse as an index of the theory of mind development (de Villiers and de Villiers 2000, Symons et al. 2005). The emotion attribution detected here thus reveals not only narrators' ability in maintaining narrative coherence but also their ability in theory of mind. Our data displays that the five-year-olds can establish a connection between characters' behavior and their mental states, which, in consonance with earlier findings, suggests that the five-year-olds' basic comprehension of mental states has been established (Martí 2003).[19] If children's advancement in theory of mind involves progression from differentiation to hierarchical integration (Harris 1983, Wellman 1988), the precedence of locally-driven emotion attribution of our five-year-olds suggests that these younger children may be restricted to the stage of differentiation and thus merely adhere to the immediate, most salient situations. The five-year-olds' limited capacity is backed up by converging evidence from the studies on the distinction between appearance and reality, in which researchers presume that preschoolers' responses are mostly based on apparent perceptual features (Perner 1991). A similar observation is also noted in Piaget's works (1952). Piaget indicates that children between ages 4 and 7 belong to the intuitive period. During this period, children's understanding of objects or events mainly relies on the most salient perceptual features of the target things, rather than on the logical or rational thinking processes. In other words, the five-year-olds' limited cognitive capacity makes them sensitive to only perceptual features and renders it difficult to reconstruct and integrate things from different perspectives. In contrast, the adults, with mature comprehension of mental states, perform a coherent analysis of the relationship between characters' mental states and the narrative context.[20] They can not only establish the links between characters' mental states and their behaviors but also take into consideration the needs of the listeners. More interestingly, they are aware that other people may be experiencing the same thing but may interpret it in a different way (Martí 2003).

[19] Researchers believe that most children establish their basic comprehension of mental states around 4 (see review in Martí 2003).

[20] Several factors may explain the developmental progress in theory of mind, including increasingly powerful information processing capacities, brain development, social experiences, and so forth (Flavell and Miller 1998).

Accordingly, they are capable of making shifts to accommodate the perspectives of various story characters and thus provide sound explanations and motivations as to what is happening in the narrative, which helps to enhance narrative coherence. To sum up, the developmental differences in the use of emotion expressions suggest that the ability to produce well-formed extended narratives in terms of coherent thematic structure emerges relatively late, as claimed by Berman and Slobin (1994).

With these analyses we have tried to explore the nature of development in children's use of emotion expressions in narratives. We hope to contribute not only to the knowledge of narrative development but also to current research on how much children know about emotional states and how readily they can apply emotion attribution in narratives. To simplify this study, we limited our subjects to a total of forty children and twenty adults. The sample size is far too small, and hence we were able to gather only limited amount of information regarding the research topics. In addition, though this study showed the developmental progression in children's use of emotion expressions, care should be taken when we generalize our findings to all children. The findings obtained here ought to be amended or augmented by studies using a larger amount of subjects, which will allow for more credence to be gained.

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情感描述語詞與故事結構：漢語兒童敘事發展之研究

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本研究探討敘事者對故事結構的掌握及其對故事人物情緒感受的描述間之關係。研究結果顯示：年齡較小的兒童傾向以故事人物面部表情或局部考量為情感指涉的依據；隨年齡漸長，兒童對局部情節的依賴遞減，故事整體架構遂成為其情感描述的參考；而成人敘事者能適當整合故事局部情節與整體架構，應運而生的情感描述語詞則有助於敘事連貫。此外，年齡較小的兒童往往僅針對一個固定角色描述其內心情感；成人敘事者則能遊走穿梭於不同人物角色的內心世界。

關鍵字：敘事發展，情感描述語詞，故事結構，局部與整體