CHAPTER 4

QUANTITATIVE FINDINGS: RESULTS AND DISCUSSION

By presenting the quantitative results from several CLAN programs and from a variety of statistical analyses (ANOVA, LSD post hoc comparisons, and hierarchical cluster analysis), the present chapter aims to provide answers to our research questions. The results of analyses cover (1) the basic length measures over time, (2) the growth pattern of quantity and variety of evaluative devices in narrative production, (3) the impact from Age, Gender, and Task on the developmental patterns of evaluative devices, (4) the order of difficulty for the acquisition of the evaluative devices, and (5) variation in preschoolers' developmental trajectories for evaluative language.

4.1 Narrative Length Measures

The first research question concerns the growth pattern of one of the basic skills in narrative production. Four length properties appropriate to this research question are used to probe the developmental path in this aspect, including number of words, number of different words, number of utterances, and mean length of utterances (MLU). To measure these properties, we employ FREQ, and MLU programs of CLAN to do the calculation. Then, to examine the influences of Age, Gender, and Task on the developmental pattern of each length property, three-way ANOVA is carried out on these properties. Sections 4.1.1 through 4.1.5 present results from statistical analyses and the general findings.

4.1.1 Number of words

The results of three-way ANOVA reveal Task main effect ($F = 28.030$, $p < 0.01$)

and Age main effect ($F = 11.516$, $p < 0.01$), but non-significant main effect for Gender. A significant interaction between Age and Gender displays ($F = 4.307$, $p < 0.05$); however, the interactions between Task and Gender, between Task and Age and among all three variables fail to reach significant level (Table 4.1, see Appendix B).[1]

The amount of words used in the narrative is an indicator of narrative length. The Age main effect indicates that preschoolers' tend to increase narrative length over time, whereas the Task main effect shows that these children are at a greater disadvantage when performing the personal narrative task than when performing the fictional narrative task. The significant interaction between Age and Gender indicates that, irrespective of task differences, the developmental trends of this length variable for female and male preschoolers are different. As post hoc comparisons illustrate, male preschoolers tend to increase the narrative length throughout the whole time span. On the other hand, female preschoolers' length significantly ascends only during the first phase (Time 1 to Time 2) but does not display significant growth during the second phase (Time 2 to Time 3) (Figure 4.1).

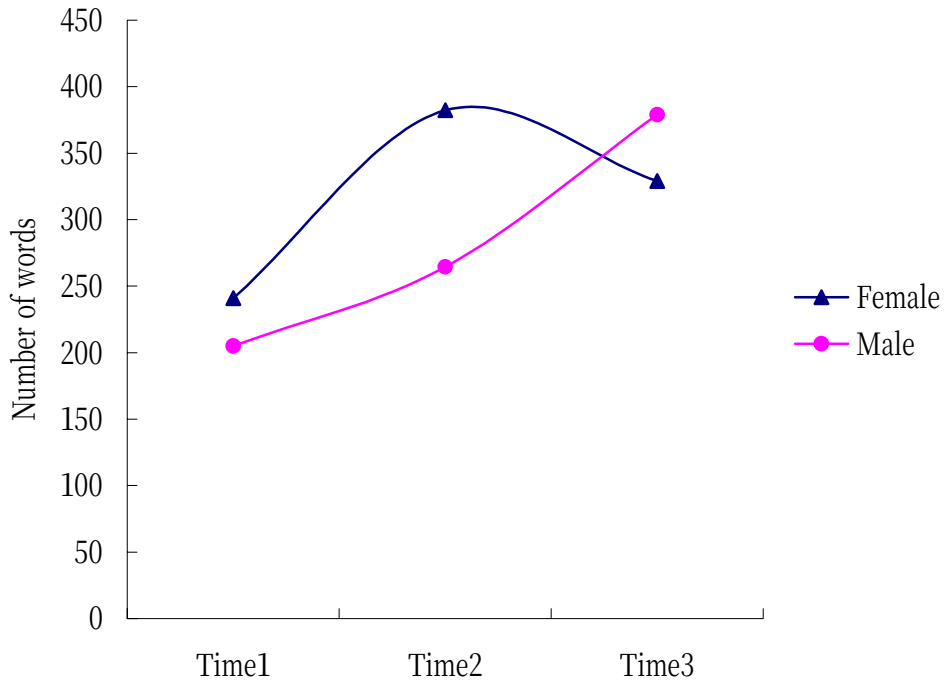

Figure 4.1. Developmental trajectory for number of words as a function of Age and Gender

4.1.2 Number of different words

In addition to the amount of words used in the narrative, the number of different words is another indicator of the narrator's linguistic ability. Results from ANOVA yield Age main effect ($F = 4.834$, $p < 0.05$) but non-significant main effect for Gender or Task. A significant Task x Age interaction ($F = 29.644$, $p < 0.01$) and a significant Task x Age x Gender interaction ($F = 5.458$, $p < 0.05$) emerge, but there is neither Age x Gender nor Task x Gender interaction (Table 4.2).

The Age main effect suggests that children employ a larger variety of words as they become older, which is most likely a manifestation of their advanced linguistic abilities. The Task x Age interaction indicates that preschoolers produce significantly more variety of words in the fictional than in the personal narrative tasks, though ascending trends are displayed in both tasks (Figure 4.2). The picture of interaction among Gender, Age, and Task is further unveiled by post hoc comparisons.

When gender difference is considered, female preschoolers employ a significantly greater variety of words in the fictional than in the personal narrative tasks across three time points (Figure 4.3). For male preschoolers, the fictional task also holds the advantage over the personal task for the first two time points; however, such an advantage no longer exists for the third time point. The discrepancy regarding task difference reflects that the magnitude of increase in word variety for male preschoolers is larger in the personal than in the fictional narrative task (Figure 4.4).

When narrative tasks are treated separately, in the fictional narrative task, female preschoolers perform better than their male counterparts, especially at Time 2 (Figure 4.5). A rather different pattern is established for the personal narrative task (Figure 4.6). That is, male preschoolers increase word variety all the way up; in contrast, their female counterparts' word variety slightly drops after Time 2, though significant level for such a decrease is not reached. Interestingly, in contrast with the female advantage in the fictional task, a reverse pattern is obtained at Time 3 at which male preschoolers use significantly greater variety of words than their female counterparts. An important implication here is that the discrepancy in developmental pattern obtained above will be masked if gender or narrative task differences are not treated separately.

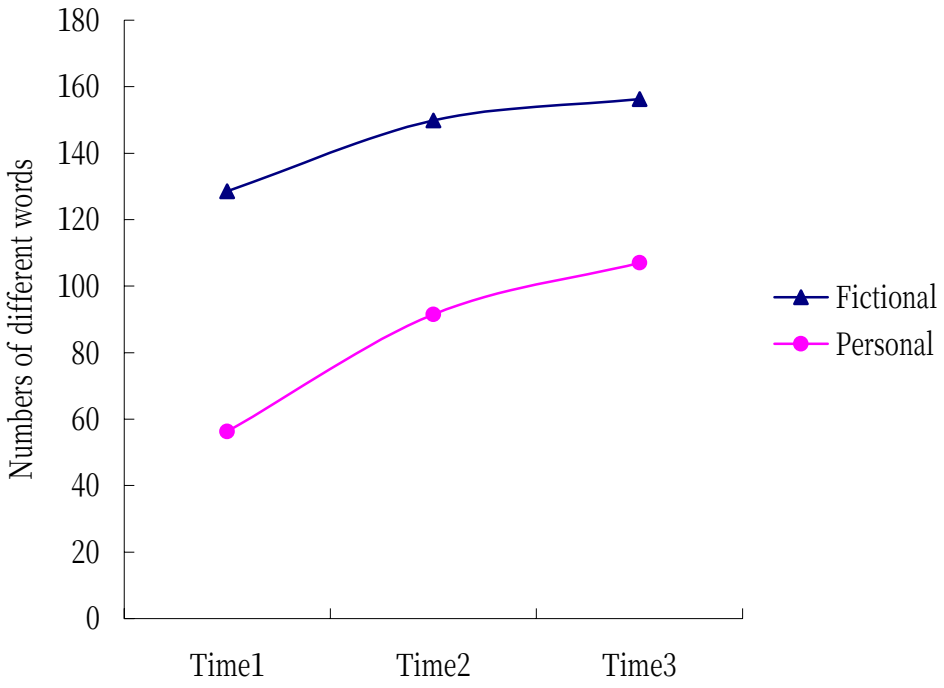

Figure 4.2. Developmental trajectory for number of different words as a function of Task and Age

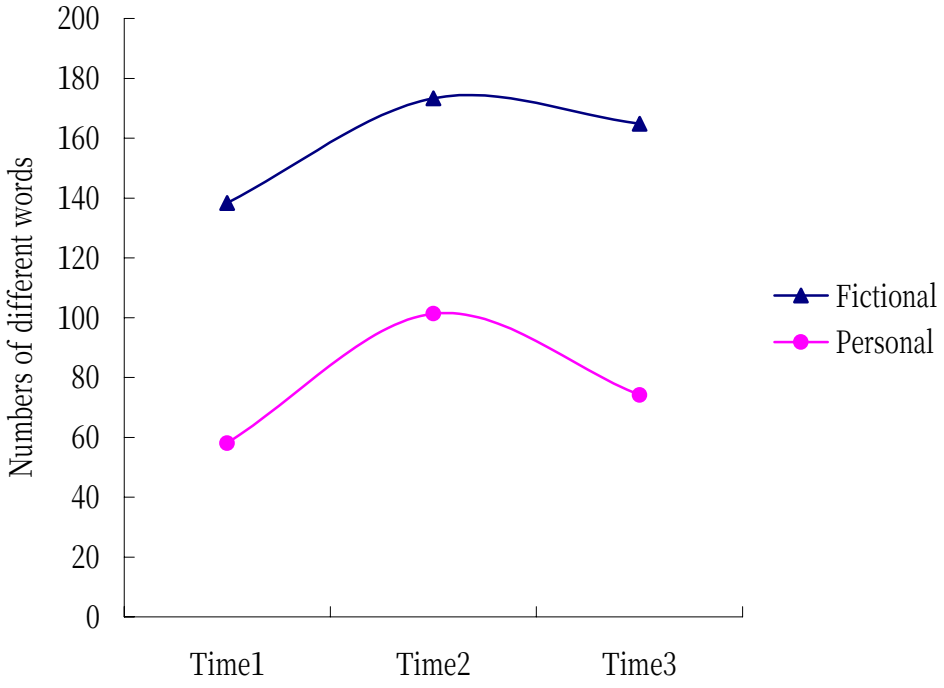

Figure 4.3. Developmental trajectory of female preschoolers for number of different words as a function of Task and Age

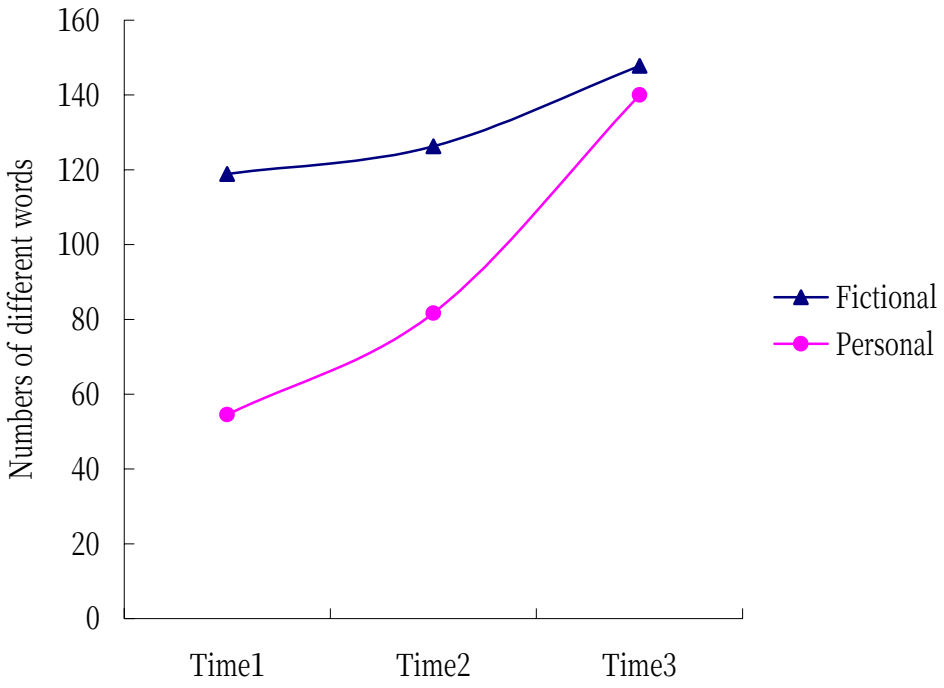

Figure 4.4. Developmental trajectory of male preschoolers for number of different words as a function of Task and Age

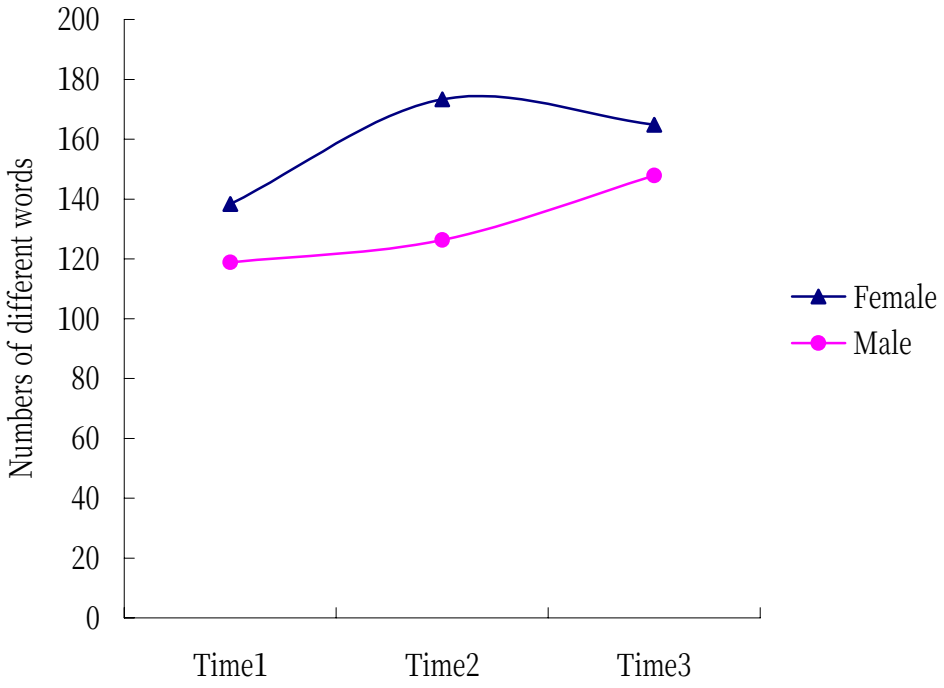

Figure 4.5. Developmental trajectory for number of different words in the fictional narrative task as a function of Age and Gender

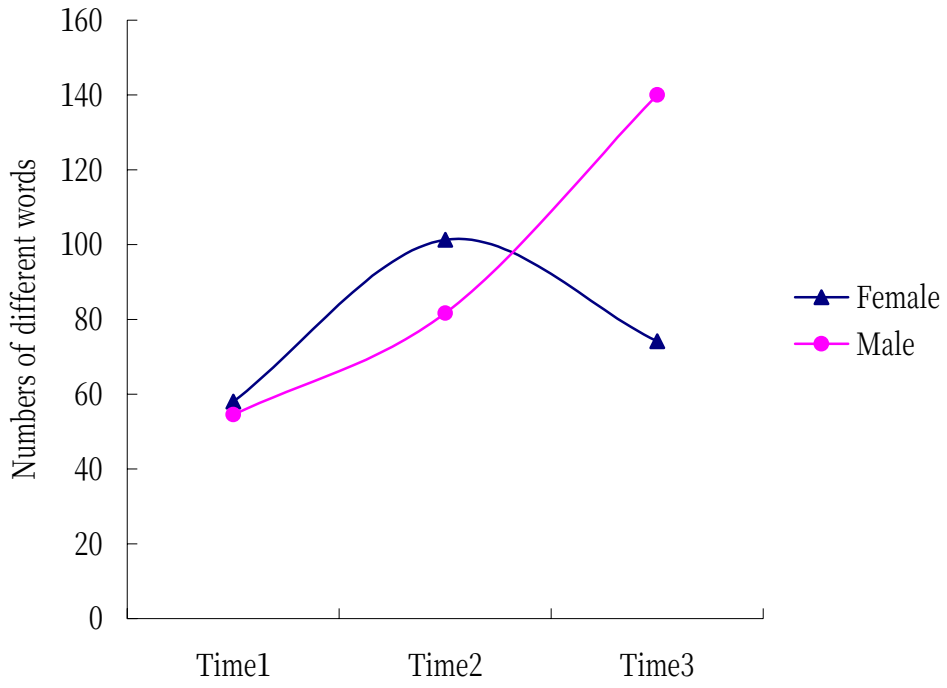

Figure 4.6. Developmental trajectory for number of different words in the personal narrative task as a function of Age and Gender

4.1.3 Number of utterances

Consistent with the findings for the previous two length properties, an Age main effect ($F = 4.904$, $p < 0.05$) is obtained for the development trend of number of utterances. The influence from Task or Gender does not reach significant level. The results of three-way ANOVA demonstrate significant interaction between Task and Age ($F=15.074$, $p < 0.01$) and among Task, Age, and Gender ($F = 5.902$, $p < 0.01$), but fail to exhibit interaction between Task and Gender or between Gender and Age (Table 4.3).

The Age main effect suggests that preschoolers produce more and more utterances in narratives over time. When narrative task difference is considered, we note that the tendency of increase in the amount of utterances is different for the fictional narrative task and the personal one. Post hoc comparisons reveal that the ascending trend for number of utterances in the fictional narrative task fails to reach

significance; in contrast, significant increase in utterances in the personal narrative task is shown throughout the time span. Though preschoolers produce significantly more utterances in the fictional narrative task than in the personal one from Time 1 to Time 2, the difference in amount of utterances between two tasks at Time 3 fails to reach significance (Figure 4.7).

The picture of interaction among Task, Age, and Gender is further unveiled by post hoc comparisons. We detect that female and male preschoolers demonstrate different developmental tendency concerning this length property. As illustrated in Figures 4.8, female preschoolers tend to produce more utterances in the fictional than in the personal narrative tasks, yet the increase rate of utterances for either task fails to reach significance. Figure 4.9 displays similar fictional advantage for male preschoolers' narrative development, but only for Time 1. It is interesting to note that after Time 2 a reverse pattern displays, in which the increase in utterances is more pronounced in the personal task, though the task difference in this regard is non-significant.

Figures 4.10 and 4.11 reveal another aspect of the interaction. As shown in Figure 4.10, in the personal narrative task, male preschoolers increase narrative length throughout the time span, whereas their female counterparts do not yield significant growth. Moreover, a male advantage is established at Time 3. A similar male advantage in the personal narrative tasks also exhibits in the development for number of different words (Figure 4.6). Taken together, the male advantages imply that there may be a boom in personal-narrative length for male preschoolers around six years of age. In the fictional narrative task, however, no significant increase or decrease is gained for either gender (Figure 4.11). The comparison between Figures 4.10 and 4.11 illustrates the afore-mentioned fictional-task advantage from another perspective, in which preschoolers produce more utterances in the fictional than in the personal

narrative tasks.

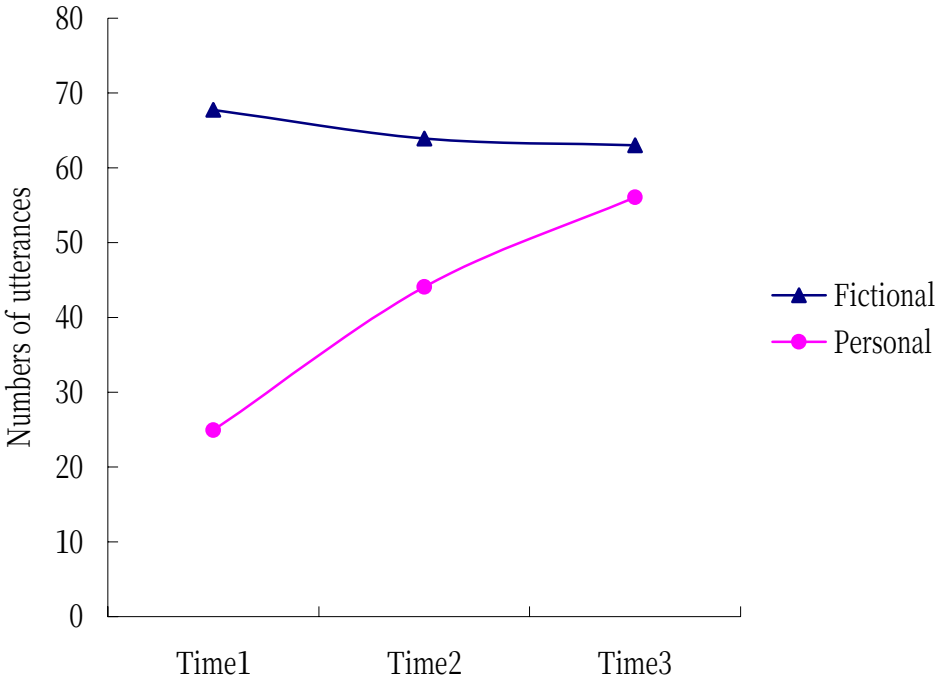

Figure 4.7. Developmental trajectory for number of utterances as a function of Task and Age

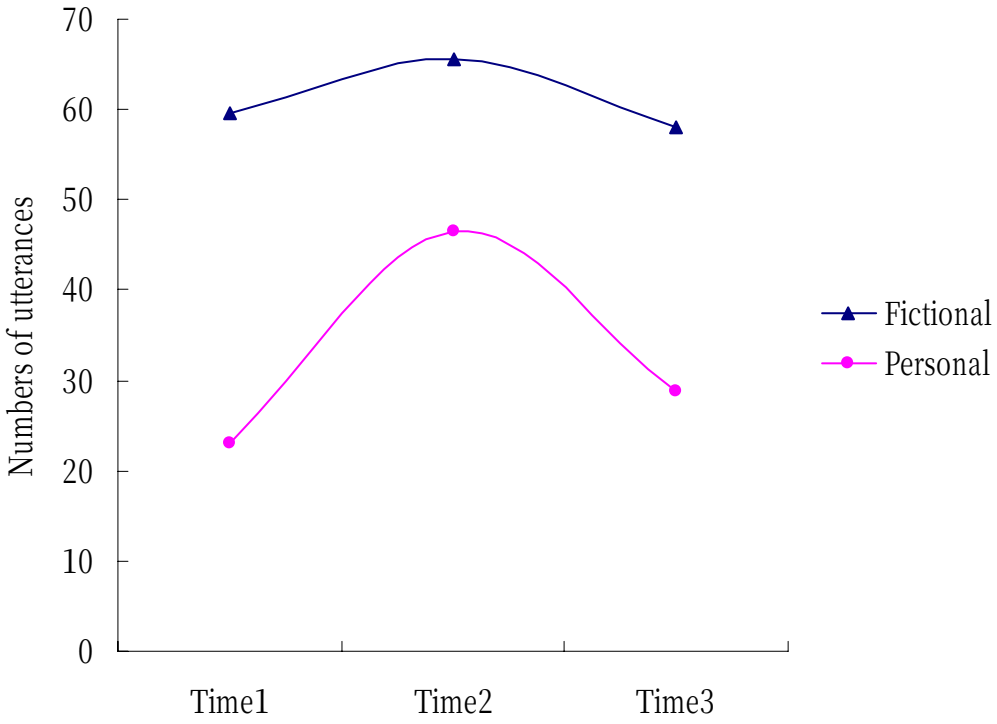

Figure 4.8. Developmental trajectory of female preschoolers for number of utterances as a function of Task and Age

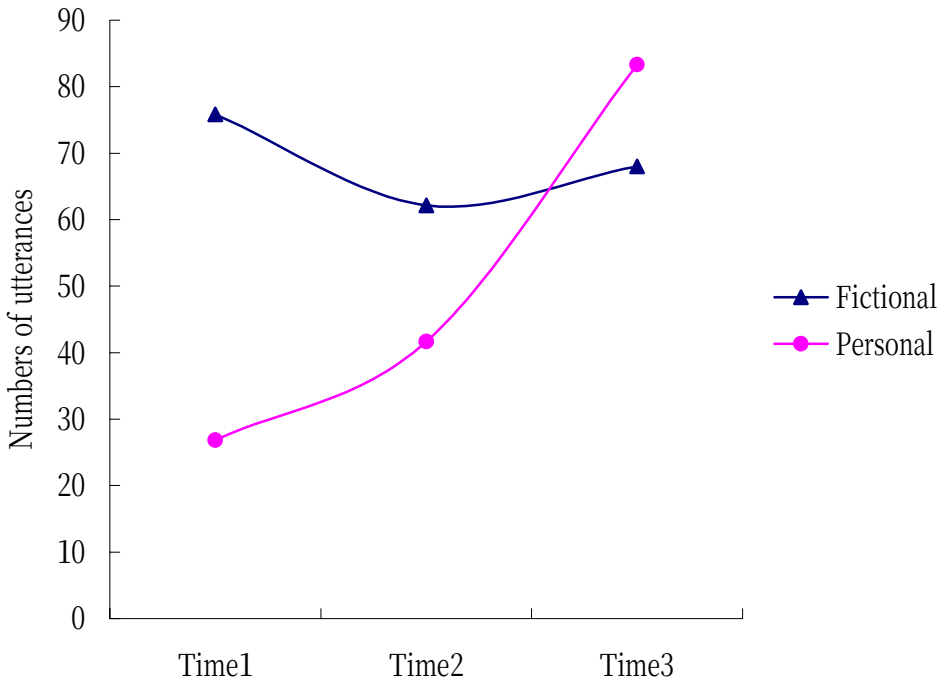

Figure 4.9. Developmental trajectory of male preschoolers for number of utterances as a function of Task and Age

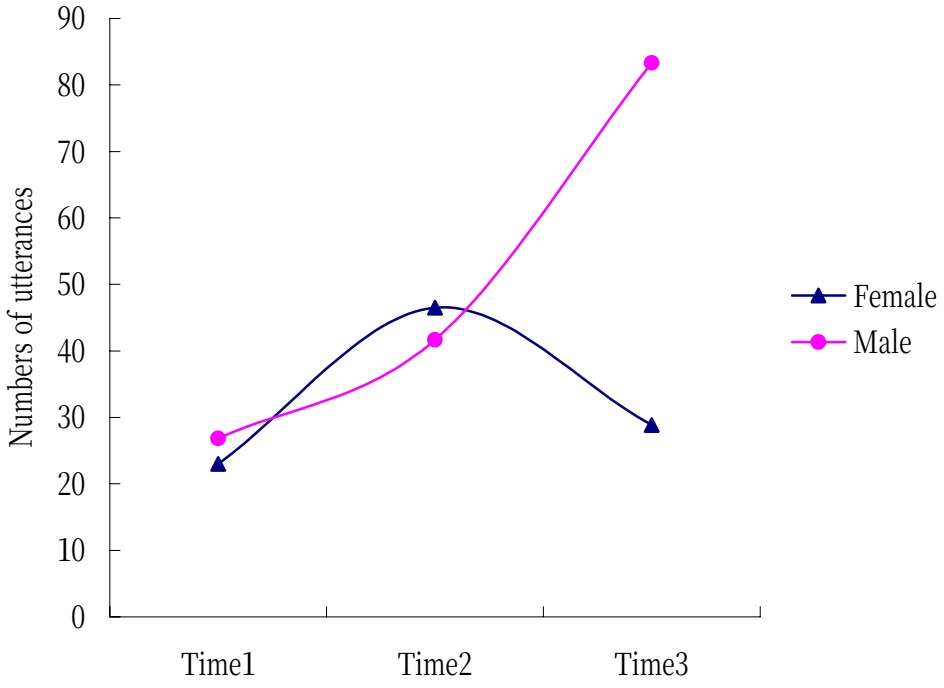

Figure 4.10. Developmental trajectory for number of utterances in the personal narrative task as a function of Age and Gender

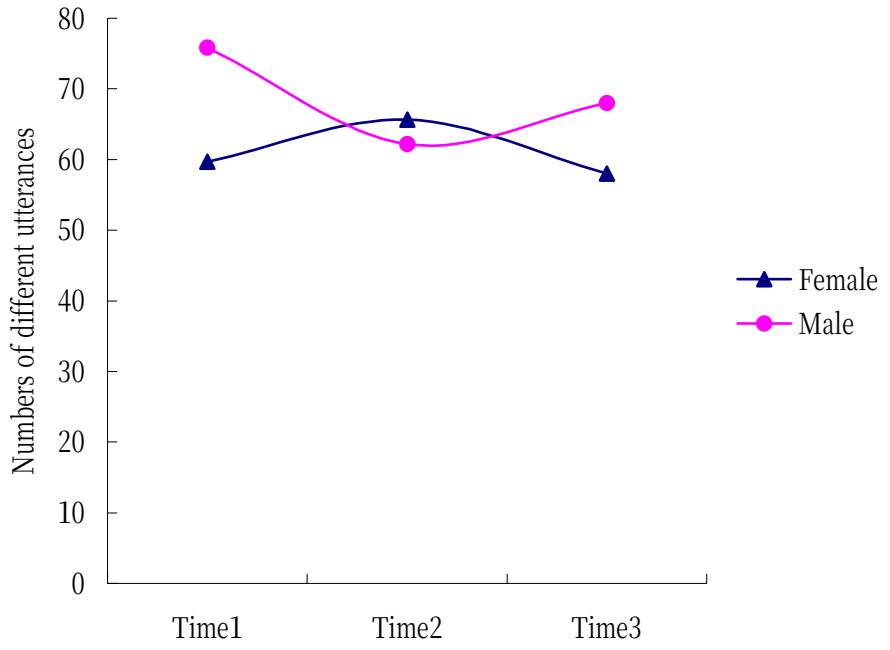

Figure 4.11. Developmental trajectory for number of utterances in the fictional narrative task as a function of Age and Gender

4.1.4 Mean length of utterances

The three-way ANOVA on mean length of utterances (MLU) yield neither main effect nor any interaction between/among variables (Table 4.4). However, if we overlook Gender difference and subject the scores of Task and Age to a two-way ANOVA, we obtain Task main effect ($F = 23.429$, $p < 0.01$) and Age main effect ($F = 3.766$, $p < 0.05$), but no interaction between Task and Age (Table 4.5). On the other hand, if we overlook Task difference and apply an Age x Gender two-way ANOVA, only Gender main effect ($F = 7.961$, $p < 0.05$) is yielded, but neither Age main effect nor interaction between Age and Gender is shown (Table 4.6).

The results from Task x Age two-way ANOVA suggest that preschoolers tend to use longer utterances in the fictional narrative task than in the personal one, and that their MLU significantly increases with age. The results from Age x Gender two-way ANOVA, however, suggest that female preschoolers tend to produce longer

utterances than their male counterparts.

Regarding the Age effect, all statistical analyses display an increasing trend, significant or non-significant, for MLU (Tables 4.4 to 4.6). Such a growing tendency is consistent with Chang's (2000) findings, in which preschoolers' MLU increases over time. Yet, the results from three-way ANOVA are not in agreement with those from two-way ANOVAs. Such discrepancies imply the importance of Gender and Task factors in the assessment of narrative competence. That is, when only Age and Task factors are considered, a significant age-related increase in MLU for preschoolers is detected; when only Age and Gender factors are examined, the gender difference is displayed; however, when Age, Task together with Gender differences are considered, non-significant growth is obtained. Thus, when assess children's narrative competence, we need to consider the gender difference and the possible task effect.

Logically speaking, the results from three-way ANOVA tend to be more reliable than those from two-way ANOVAs. Yet, the former analysis fails to yield any significant effect on the development of MLU. The lack of main effects seems to suggest that MLU may not be a proper indicator for linguistic ability of our subjects. As 張顯達 (1998) suggests, for Mandarin-speaking children, MLU is applicable to indicate linguistic ability only for those who are below four and a half years of age, or whose MLU is below 3.5. Given the fact that the mean age of our subjects is 5;5, the insensitivity of MLU to main factors as shown above is explicable.

4.1.5 Discussion and conclusions

The above sections focus on the assessment of development in narrative length in terms of four length properties. The first three properties (number of words, number

of different words, and number of utterance) display Age main effects, which is in agreement with previous findings reported by Chang (2000) and Chang (2001).[2] Though Task only significantly influences the growth in number of words, its interaction with other variables can be traced in the developmental trends for number of different words and for number of utterances. Congruent with findings of Allen and her colleagues (1994), all length properties are more pronounced in the fictional narrative task than in the personal one, no matter the difference in mean scores reaches significance or not (Tables 4.1 through 4.4). Thus, the implication obtained here is that conclusions regarding children's narrative development should not be drawn on analyses of only one type of narrative task. As Shiro (2003:165) states, "children's narrative competence cannot be assessed in a single story-telling task".

The third variable Gender does not yield main effect for any length property; however, it interacts with other variables in the development concerning number of words, number of different words, and number of utterances, which underlines its plausible contribution to the development of these length properties. It is interesting to note that male preschoolers' growth in these properties is more pronounced in the personal narrative task than in the fictional one, and that the male advantage exhibits only in the personal narrative task at Time 3. This male advantage at the later developmental stage is similar to Chang's (2001) observation, in which girls around 5 years of age produce longer personal narratives than boys, yet a reverse pattern exhibits when they grow up to 6 years of age. This evidence leads us to infer that certain developmental shifts in this age range might occur especially in personal experience narratives and mainly in male preschoolers' narration. Taken together, these results suggest that children's narrative development cannot be assessed in a single story-telling task, given the influence that gender and narrative-task differences seem to have on narrative performance.

In sum, our data suggest that Mandarin Chinese-speaking preschoolers' basic narrative measures tend to increase with age. According to Peterson and McCabe (1983), narrative length is correlated with complexity. Thus, the greater length of the narratives obtained here is most likely a manifestation of children's increase in narrative skills. In the following sections, in-depth investigations in one aspect of narrative skills, i.e., the use of evaluative devices, will be presented.

4.2 Evaluative Devices

Turning now to Research Questions 2 through 5, we aim to explore the development for the use of evaluative devices in narratives and to assess the possible influence from Age, Gender, and Task on the use of these devices. Previous findings document that children around 5 years old can provide evaluative comments in their narratives (Bamberg and Damrad, 1991; Kernan, 1977; Umiker-Sebeok, 1979; Peterson and McCabe, 1983). As Peterson and McCabe (1983) delineate, almost half of their children's narrative comments express some evaluation, whether in terms of particular words, phonology, or evaluative dependent clauses. Based on the general assumption that the evaluative devices listed in Section 3.6 are good reflection of preschoolers' evaluation skills, the ensuing discussions trace the development of evaluative skills in terms of the development of each evaluative device and the developmental trend for quantity and variety of evaluative devices in total. One implication from Sections 4.1.1 through 4.1.5 is the importance of Gender and Task variables on the assessment of narrative competence. Accordingly, the possible impact from these variables on the use of evaluative devices will be considered in the following analyses. We also explore if different evaluative devices are employed to different degrees over time, between genders and between narrative tasks.

4.2.1 Quantity and variety

The second and third research questions concern about the variety and overall incidence of evaluative devices. As shown in Table 4.7, results from ANOVA exhibit Age main effect ($F = 14.520$, $p < 0.01$), but no main effect for either Gender or Task. There is only one interaction (Age x Gender) reaching significant level ($F = 4.545$, $p < 0.05$). As hypothesized, the significant Age effect reflects that preschoolers use more and more evaluation in their narratives over time. Post hoc comparisons further reveal that male preschoolers steadily increase their use of evaluative devices throughout the time span, whereas female preschoolers display the growth in the first phase (Time 1 to Time 2), but exhibit a leveling-off of growth in the second phase (Time 2 to Time 3) (Figure 4.12).

The Age effect on overall incidence of evaluative expressions obtained here is consistent with the findings for Mandarin-speaking children from Chang (2000) and Huang (2002)'s studies.[3] In contrast, Chang's (2001) research does not display significant age change in this aspect. Regarding cross-linguistic comparisons, both Kernan's (1977) and Ukrainetz and her colleagues' (2005) studies detect an increasing trend in children's use of evaluative expressions in narratives. A similar age change also exhibits in Minami's (1996) work on Japanese-speaking children. On the other hand, Peterson and McCabe (1983) do not detect significant increase in the overall incidence of evaluative expressions used by children. The discrepancies in research findings may be attributable to different research designs. For instance, Chang's (2000) and my works are longitudinal studies, whereas Peterson and McCabe's and Chang's (2001) studies use cross-sectional data. Moreover, some studies elicit personal narrative data, whereas others adopt fictional narrative data. Thus, it is interesting for us to speculate whether findings from studies of different nature can converge. More investigation is thus needed to present a clearer picture about the

growth in quantity of evaluative devices.

With respect to the variety of evaluative devices, ANOVA yields Age main effect ($F = 14.757$, $p < 0.01$) and Task main effect ($F = 17.905$, $p < 0.01$), but no main effect for Gender. The only significant interaction is between Gender and Task ($F = 5.526$, $p < 0.05$) (Table 4.8).

Post hoc comparisons indicate that preschoolers, both female and male, use a larger variety of evaluative devices in the fictional narrative task than in the personal ones, which suggests that the same child may use evaluative devices differently in different narrative tasks. Given the fact that different communicative purposes underlie fictional and personal narratives, this fictional task advantage is accountable. To make sense of one's own experience, a narrator has to follow events in the real world in personal narratives. More freedom, however, is granted to the narrator and the addressee in fictional narratives. As a result, a larger variety of evaluative expressions tends to be employed in the fictional narrative task.

Earlier studies claim that personal experience narratives can better reveal children's control of the evaluative language skills (Labov, 1981; Peterson and McCabe, 1983; Miller and Sperry, 1988). However, the fictional narrative task advantage obtained here seems to suggest that the fictional narratives might be an even better indicator than the personal narrative task in this aspect. The seemingly contradictory result in our work leads us to speculate that other task-related factors rather than genre preference alone may be responsible for the fictional task advantage. For instance, picture stimuli provided in the fictional narrative task may enhance children's narrative production and hence enrich their evaluative expressions. Therefore, before we claim that a possible genre advantage is yielded, more in-depth research needs to be done to further clarify the issue.

The Age effect indicates that there is an age-related increase in variety of

evaluative devices, which is in consonance with the findings of previous studies (Chang, 2000; Chang, 2001; Peterson and McCabe, 1983). Regarding the interaction between Gender and Task, we note that, in the fictional narrative task, female preschoolers use a significantly greater variety of said devices than their male counterparts.

To sum up, preschoolers employ increasing amount and variety of evaluative devices across the three time points, which suggest that children have better linguistic abilities with increasing age (Figure 4.13). As Minami (1996) states, preschoolers are increasingly capable of elaborating their narratives in a more refined and mature style. The Task effect and Gender x Task interaction obtained here reflect that preschoolers seem to know how to respond to different narrative task demands. Consequently, when the variety of evaluation is discussed, possible task influence should be taken into account. The increase in number and variety of evaluation indicates that preschoolers, as they grow older, increasingly provide a more finely differentiated view of their feelings about their experience and about the context. The more expressive options imply that children are cognitively, communicatively and linguistically more mature with increasing age (Berman and Slobin, 1994).

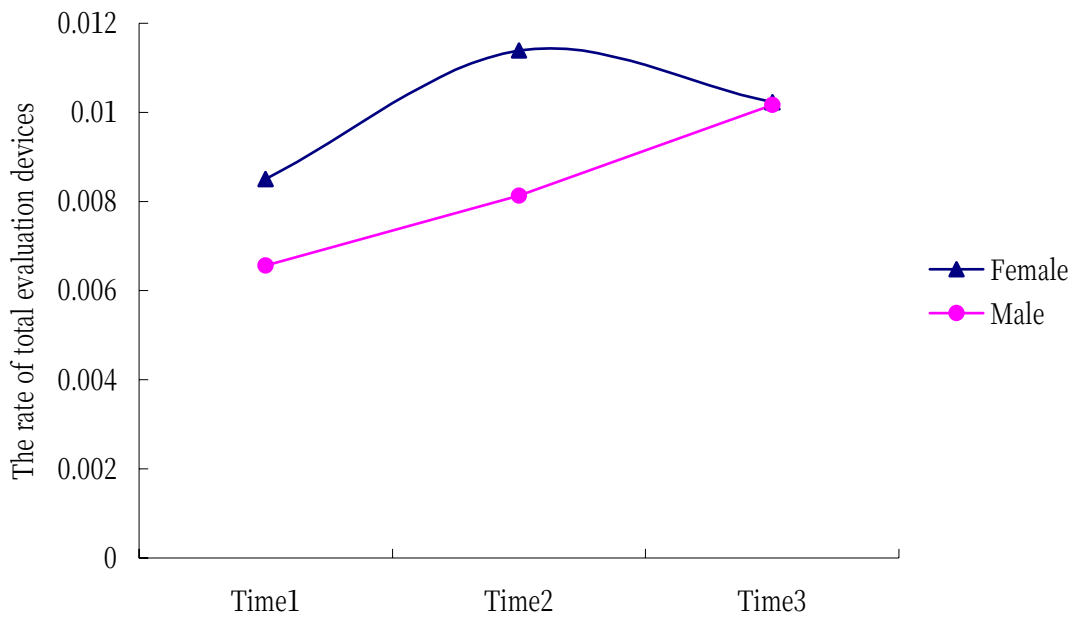

Figure 4.12. Developmental trajectory for total amount of evaluative devices as a function of Age and Gender

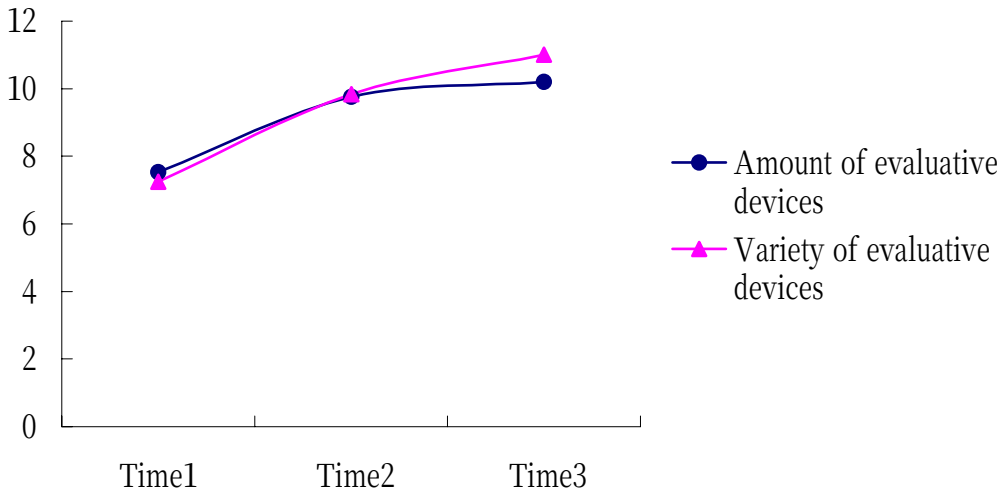

Figure 4.13. Developmental trajectories for total amount and variety of evaluative devices

4.2.2 The development of each evaluative device

The forth and fifth research issues we are interested in concerns about the impact from Age, Gender, and Task on the use of evaluative devices. To respond to these questions, Sections 4.2.2.1 through 4.2.2.18 encompass the distribution of 17 evaluative devices, at three time points, with regard to Age, Gender, and Task. The main effect or interaction from these three variables will be presented and discussed.

4.2.2.1 Character speech (CAS)

Character speech is an effective evaluative device dramatizing and emphasizing elements in narratives. In our analyses, Age main effect ($F = 3.576$, $p < 0.05$) and Genre main effect ($F = 11.703$, $p < 0.01$) are exhibited; yet, neither main effect for Gender nor interaction among/between variables is obtained (Table 4.9). LSD post hoc comparisons suggest an advantage of the fictional narrative task over the personal narrative task with regard to the use of CAS. Moreover, preschoolers increase their use of CAS over time, which confirms findings from other researchers (Peterson and McCabe, 1983; Chang, 2001).

4.2.2.2 Comparison (COM)

Similar to CAS, analysis on COM yields main effect for Task ($F = 7.994$, $p < 0.05$). Such a main effect reveals that preschoolers employ COM more often in the fictional narrative task than in the personal one, which implies that the same evaluative device could be employed differently in different narrative tasks. On the other hand, we do not detect main effect for Age or Gender or any interaction among/between variables (Table 4.10). Chang (2000) finds out a steady increase in the use of COM in younger preschoolers' personal narratives. We also find a growing tendency for the use of COM in the personal narrative task. In the fictional

narrative task, however, our subjects do not use more COM with increasing age. The discrepancy exhibited here again underscores the importance of Task difference in the investigation of narrative development.

4.2.2.3 Conditional description (CON)

In our data, preschoolers at Time 2 begin employing conditional clauses in their narratives to refer to possible consequences of a situation. Due to the scarcity of incidence, we obtain neither main effect for any variable nor interaction among/between variables (Table 4.11). Even so, we find that preschoolers use slightly more CON in the personal than in the fictional narrative tasks and that male preschoolers use slightly more CON than their female counterparts.

It is interesting to note that our subjects, both male and female, do not use CON until they are at Time 2. The rarity of CON in our data and its late emergence are accountable. The use of such a device involves hypothetical thinking, while, according to Piaget (1962), children before 7 are not quite familiar with concrete operations, hence they cannot take into consideration all the logically possible outcomes in hypothetical situations. Accordingly, we speculate that CON is a complicated device so that better linguistic as well as cognitive abilities are required for speakers to use it.

4.2.2.4 Compulsion word (CPW)

Through inspection of the data for CPW, we find that preschoolers use more CPW in the personal narrative task than in the fictional one, and that boys tend to employ this device slightly more often than girls. Nevertheless, ANOVA neither yields main effect for any variable nor displays interaction among/between variables (Table 4.12). In Peterson and McCabe's (1983) study, they detect a growing trend

for CPW, since 6-year-olds use more CPW than 5-year-olds. However, for the personal narrative task in the present work, the ascending developmental trend for this device displays only in the second phase (Time 2 to Time 3), while a reverse developmental trend manifests in the first phase. It is in the fictional narrative task we detect steady growth in the use of CPW. To sum up, different narrative tasks seem to have different impacts on the use of CPW, though none significant effect exhibits here.

4.2.2.5 Causal explanation (CSE)

As Chang (2001) states, causal explanation indicates the inferred motivation and reveals the implicit relationships between events. She finds substantial growth in the use of this CSE for preschoolers from age 5 to 6. A similar ascending trend over time is noted by Huang (2002). On the other hand, no such Age main effect displays in Peterson and McCabe's (1983) or in our studies.

In our work, results from ANOVA yield neither Task nor Gender main effect. The only significant interaction exhibited is that between Age and Gender ($F = 3.787$, $p < 0.05$). As Table 4.13 indicates, our male preschoolers increase their use of CSE throughout the time span, even though the magnitude of growth does not reach significance; in contrast, their female counterparts do not increase their use of such a device throughout time. More interestingly, as indicated by post hoc comparisons, our female preschoolers decrease their use of CSE from Time 2 to Time 3, and such transitions occur in both narrative tasks. The decrease in CSE does not mean that female preschoolers have less and less logical thinking, or that they pay less and less attention to the causal relationships between events. Through inspection of transcriptions, we note that, from Time 2 to Time 3, female preschoolers still take heed of the causal connections between events though they use less and less literal

devices to signal such relationships. The above observations display different paths between genders in the development of CSE and underscore the importance of Gender difference when narrative development is taken into account.

4.2.2.6 Evaluative word per se (EVA)

The frequency of occurrence for EVA is obviously larger than those for previously-mentioned devices. In spite of this advantage, ANOVA does not yield any main effect or interaction among/between variables (Table 4.14). Inspecting the data, we find that female preschoolers tend to use more EVA than their male counterparts, though the difference in occurrence between genders is not significant.

EVA is regarded as the effective way to reflect speaker's subjective evaluation. In cross-sectional studies on personal narratives, researchers detect Age main effect, in which 6-year-olds use significantly more EVA than 5-year-olds do (Peterson and McCabe, 1983; Chang, 2001). Our longitudinal project displays a similar growing trajectory for the use of EVA in the personal narrative task. Such an ascending trend is also shown in the total incidence of EVA (regardless of task difference), though the magnitude in increase fails to signal a significant Age main effect.

The discrepancy in research findings regarding Age main effect is explicable in terms of differences in research designs. That is, there might not be a convergence between results from studies of between-subject design (cross-sectional) and those from studies of within-subject design (longitudinal). Moreover, these earlier works merely include personal narrative tasks, whereas our work includes not only the personal but the fictional narrative tasks. The data obtained here seems to suggest that task differences may influence the use of EVA.

4.2.2.7 Evaluative connective (EVC)

In our data, most EVC are concessive or additive conjunctions which are used to signal the upcoming of an unexpected or surprising event (Wang, 1998). Results of ANOVA do not reveal main effect for any variable. The only significant interaction obtained is that between Age and Gender ($F = 3.696$, $p < 0.05$). As Table 4.15 displays, male preschoolers tend to increase their use of EVC, whereas their female counterparts do not exhibit such ascending tendency.

In Wang's (1998) study on children aged 3 to 7, the occurrence rate for such a device is comparatively low and children do not begin to use these connectives until they reach 6 years of age.[4] Given the fact that the concepts of concession and addition are more cognitively demanding, EVC is expected to emerge at a later developmental stage. As Wang mentions, only when children are cognitively and linguistically more mature, can they produce coherent narratives by using cohesive/ evaluative device such as EVC. In our data, the scarcity of incidence for this device is also shown. Since our subjects' mean age ranges from 5;3 to 5;11, the low occurrence rate for such a device in our work is explicable.

4.2.2.8 Exaggeration (EXA)

As Peterson and McCabe (1983) state, this device is used for the expansion of event that really occurred. ANOVA yields neither main effect for any variable nor interaction among/between variables. Table 4.16 suggests that there is no steady developmental tendency for the use of this device and that preschoolers employ it more often in the personal narrative task than in the fictional one. Despite the limited incidences, we note that female preschoolers use more EXA than their male counterparts do and that male preschoolers begin to use this device later than female preschoolers. As illustrated in our data, EXA shows up in female preschoolers' narratives throughout the time span, whereas it does not appear in male preschoolers'

narratives until Time 3.

4.2.2.9 Expression of intention (EXI)

This category includes expression of hopes, desires and intentions. Compared with EVA or INT, this device has much lower occurrence rate, which supports Peterson and McCabe's (1983) findings. Due to the scarcity of the incidence, neither significant main effect for any variable nor interaction among/between variables is established. Nevertheless, our data suggest that that preschoolers increase their use of such a device over time, and that female preschoolers employ it more often than their male counterparts (Table 4.17).

4.2.2.10 Explicit negation (EXN)

As Peterson and McCabe (1983) state, EXN is a device which informs the listener that certain expectations were held but not met. This device displays neither any main effect nor interaction among/between variables (Table 4.18). Unlike EXI, EXN is used more often in the fictional narrative task than in the personal narrative task, though task difference is non-significant. The non-significant effect for Age is consistent with Chang's observation (2000), in which no steady growth regarding EXN is established for preschoolers, though her subjects (age ranging from 3;6 to 4;3) are younger than ours. On the other hand, Huang (2002) spots a descending trend in the use of EXN from ages 5 to 6. It seems feasible for us to infer that children before age 6 are not cognitively mature enough to employ EXN well in their narratives. As a result, the frequency of occurrence for this device in narratives varies in different studies and fluctuates over the age span.

4.2.2.11 Frames of mind (FOM)

As Tager-Flusberg and Sullivan (1995) state, a good story often provides

explanations for protagonists' actions by referring to their motivations or mental states. In the study on Venezuelan children's evaluative stance, Shiro (2003) notes that, among various evaluative categories, only the frequency of references to cognitive states is responsible for the interaction between age and socioeconomic status. Likewise, Ukrainetz and her colleagues (2005) find that the expressions elaborating internal states increase in variety over time. Recent studies on personal narratives from Mandarin preschoolers detect an increasing trend in the use of FOM over time (Chang, 2000; Chang, 2001).[5] Similarly, studies on English-speaking children find out an ascending trend for this device, though its magnitude of increase does not reach significance (Peterson and McCabe, 1983; Bamberg and Damrad-Frye, 1991).

Consistent with earlier findings, our data reflects that, in both narrative tasks, preschoolers employ more and more FOM with increasing age, though the Age main effect fails to display. In addition, ANOVA yields Task main effect ($F = 8.018$, $p < 0.05$), but neither main effect for Gender nor any interaction between/among variables (Table 4.19). Post hoc comparisons reveal that preschoolers use more FOM in the personal narrative task than in the fictional one. The advantage of the personal narrative task implies that it may be easier for preschoolers to describe their own emotional/mental states in personal narratives than to infer others' states of mind as often needed in presenting fictional stories. The latter work requires the narrator to make judgment from others' perspective. Hence, it is cognitively more complicated and more challenging, as stated by Chafe (1994).

4.2.2.12 Hedges (HEG)

With regard to hedges, three-way ANOVA analyses exhibit neither main effect for any variable nor interaction among/between variables (Table 4.20). Bamberg and Damrad-Frye (1991) define HEG as a distancing device and note that older children

use more hedges than younger children in fictional narratives. We also notice a growing tendency for HEG in the fictional narrative task, though both studies fail to show significant Age main effect for this device.

Bamberg and Damrad-Frye (1991) point out that, among the evaluative devices they investigated, HEG and FOM and the only two devices display Age main effect. They speculate one possible explanation for this by drawing upon the commonality between the general discourse functions of HEG and FOM. That is, both devices allow narrators to take a different epistemic stance.[6] In the present work, we also spot growing trends for both devices, yet we need further consideration as to what their narrative functions are before presenting any conclusive findings in this regard.

4.2.2.13 Intensifier (INT)

Previous studies indicate that INT is the most common evaluative device used in personal experience narratives (Chang, 2000; Chang, 2001). This device ranks the second, though not the most frequently used one, in the present work (Section 4.2.3). As Table 4.21 reveals, ANOVA yields significant main effect for Task ($F = 7.713$, $p < 0.05$), but non-significant effect for Age or Gender. The interaction among/between variables fails to demonstrate significance. The results from post hoc comparisons suggest that preschoolers use INT more often in the personal narrative task than in the fictional one. Though no Age main effect displays, we can spot the ascending trend for the use of this device in the personal narrative task, which confirms Chang's (2001) observation. In the fictional narrative task, however, no steady tendency is spotted, which means that the use of INT in this condition fluctuates over the age span.

4.2.2.14 Exclamations and utterance-final particles (PAR)

Another way to manifest a speaker's attitude and communicative intentions is the use of words such as 喔 'oh', 啊 'ah', 哇 'wow', whether they are used as exclamations or utterance-final particles. We detect significant main effect for Gender ($F = 7.148$, $p < 0.05$), but non-significant main effect for Task or Age (Table 4.22). The interaction between/among variable fails to reach significance. The Gender main effect indicates that female preschoolers employ significantly more PAR device than their male counterparts. Like INT, preschoolers use PAR more often in the personal narrative task than in the fictional one, though the difference between tasks fails to reach significance.

4.2.2.15 Repetition (REP)

The repetition investigated here is merely for the sake of emphasis. As indicated in Table 4.23, ANOVA reveals a Task main effect ($F = 5.554$, $p < 0.05$) but non-significant main effect for Age or Gender. On the other hand, the interaction among/between variables fails to reach significant level. Post hoc comparisons indicate that REP has a larger frequency of occurrence in the fictional narrative task than in the personal one, which implies that different narrative tasks may have different demands for the same device. The lack of Age main effect again supports Chang's (2000) earlier findings. What's more, the scarcity of incidence for REP agrees with Huang's (2002) observation that preschoolers, when expressing evaluative comments, use much less rhetorical device like repetition than lexical devices such as INT or EVA.

4.2.2.16 Sound modification (SOM)

In addition to onomatopoeia words, sound modification covers some suprasegmental strategies, such as using higher stress or elongating words. The

three-way ANOVA analyses yield Task main effect ($F = 7.191$, $p < 0.05$) and Age main effect ($F = 4.434$, $p < 0.05$), but neither Gender main effect nor interaction between/among variables (Table 4.24). LSD post hoc comparisons further reveal that our subjects employ SOM more in the fictional narrative task than in the personal one, and that, with increasing age, they use this device more and more in both narrative tasks. The Age main effect obtained here supports Huang's (2002) observation that children of 5 to 8 years of age use an increasing amount of SOM in their fictional narratives.[7] A similar Age effect for children of this age span is also claimed by Peterson and McCabe (1983), though they focus only on personal experience narratives.

4.2.2.17 Verbal qualifier (VRQ)

VRQ is used to evaluate onset or duration of an action or event. Statistical analyses yield significant main effect for Task ($F = 14.209$, $p < 0.01$), but non-significant main effect for Age or Gender. There is a significant interaction between Task and Age ($F = 4.421$, $p < 0.05$); however, Task x Gender, Age x Gender, or Task x Age x Gender interaction does not reach significance (Table 4.25). Post hoc comparisons indicate that more VRQ is used in the fictional narrative task than in the personal one. Regarding Task x Age interaction, it is interesting to note that the use of VRQ in the fictional narrative task increases in the first phase yet decreases in the second phase. In contrast, there is no steady growth for VRQ in the personal narrative task, which supports Chang's (2000) observation.

4.2.2.18 Discussion and conclusions

Sections 4.2.2.1 through 4.2.2.17 present the results from three-way ANOVA for the development of each evaluative device in preschoolers' narratives. Seven out of

the seventeen devices display Task main effect (i.e., CAS, COM, FOM, INT, REP, SOM, and VRQ). Among them, CAS, REP, SOM, and VRQ are more pronounced in the fictional narrative task, whereas the other three are more pronounced in the personal narrative task. The outcomes suggest that different narrative tasks may have different impacts on children's use of evaluative device, which also implies that the same child may use different evaluative skills in different narrative tasks.

Our project involves two narrative tasks. The major difference between them is that they base on different narrative genres. Though it is not proper for us to claim that the Task effects lead to such and such crucial findings about narrative genres, we may indirectly infer that genre differences can possibly influence the way preschoolers use evaluative devices. Earlier studies show that different narrative genres involve different content and linguistic knowledge (Hudson and Shapiro, 1991; Hudson and Nelson, 1986). Given the fact that differences exist between fictional and personal narratives with respect to their underlying assumptions, communicative purposes, perspectives and topics (Shiro, 2003; Allen et al., 1994), we suggest that different linguistic knowledge is actually drawn upon in narrative tasks of different genres, and that there are differences in the ways children develop task-specific narrative skills. The task effects also imply that preschoolers are aware of different task demands.[8]

To sum up, our data suggests that evaluative language skills are employed differently in personal and fictional narrative tasks on the basis of their varied functions in different narrative tasks and task-specific characteristics. In the discussion of narrative length (Sections 4.1.1 through 4.1.5), we note that Task is an influential factor in the variation of narrative length. Given the task influences on not only narrative length but also on the use of evaluative skills, one implication from our study is that children's narrative competence cannot be assessed in a single

narrative task.

Regarding Age main effect, merely two devices, CAS and SOM, exhibit such effects. What's more, five other devices display an increasing tendency, though their effects fail to reach significance (i.e., COM, EVA, EXI, FOM, INT). For the rest of the devices, their occurrence rates are still fluctuating. Taken together, our results suggest that preschoolers from age 5;6 to age 6 are still exploring and doing experiment about the evaluative language skills they acquired.

In the previous study by Chang (2001), Age main effect is established only for FOM but not for other evaluative devices. Similarly, in Bamberg and Damrad's work (1991), FOM is one of the two devices which display Age main effect. The significance of FOM is also evident in Shiro's (2003) work, in which the references to cognitive states are responsible for the interaction between age and socioeconomic status. Likewise, the present work detects a growing trend for the use of FOM in both narrative tasks, but the Age effect fails to reach significant level. The discrepancies in research findings regarding Age main effect for FOM may be attributed to differences in research design. Chang, Shiro and Bamberg and Damrad gather cross-sectional data, whereas we collect longitudinal ones. Moreover, different studies involve subject populations of varied nature. Therefore, before any conclusion is reached, we need more research works, both cross-sectional and longitudinal, to further investigate the plausible Age impact in this regard.

Among the 17 evaluative devices, PAR is the only device which demonstrates Gender main effect. Through inspection of data, we find that female preschoolers use exceedingly more PAR than their male counterparts. This finding is congruent with that from Peterson and McCabe (1983), which shows that girls are more likely to interject exclamations and verbal stress. According to them, gender difference, if any, can merely be found in types of evaluative devices children provide but not in the

nature or complexity of their narration. Though, in our work, the impact from Gender is less pronounced than that from Task on the development of evaluative skills, nearly half of these devices (CAS, EVA, EXI, EXA, FOM, INT, PAR, and REP) exhibit female advantage, whereas only one device (EXN) displays male advantage. The overwhelming lack of significant Gender main effect in our work confirms the findings from Peterson and McCabe (1983) and Chang (2001). As reviewed by Maccoby and Jacklin (1974), significant gender differences are rarely found in the language of children between the ages of 3 and 11, but where they are, girls tend to be superior to boys in certain linguistic abilities.

4.2.3 Order of difficulty

With regard to the sixth research question, we hypothesize that the preference for each evaluative device changes over time, and varies between tasks and between genders. The evaluative devices are rank-ordered according to frequency of occurrence in the following tables. The ranking in Table 4.26 bases on the total incidence for each device in our data pool, without considering task and gender differences.

Among the 17 devices, INT, EVA, FOM, CSE, and EXN are the top five which are used most often by our subjects.[9] When task difference alone is taken into account, however, the ranking varies between different narrative tasks. In the fictional narrative task, EVA, INT, CSE, FOM, and EXN rank the top five, whereas, in the personal narrative task, INT, EVA, FOM, CSE, and CPW are the top five (Tables 4.27 and 4.28). On the other hand, when both task and gender differences are considered, gender difference for device ranking is more pronounced in the fictional narrative task. As illustrated in Tables 4.29 and 4.30, in the fictional narrative task, the preference ranking for female preschoolers is EVA, INT, CAS, CSE,

and FOM; in contrast, the ranking for male preschoolers is INT, EVA, CSE, EXN, and FOM. In the personal narrative task, however, the top four devices for both genders are exactly the same: INT, EVA, FOM, and CSE (Tables 4.31 and 4.32). Likewise, INT, FOM, and EVA are among the most popular devices used by Chang's (2000) younger children (age 4;3) in personal narrative tasks.

No matter what perspective is used to inspect the data, we find that INT and EVA rank the two most frequently used evaluative devices, which confirms the earlier findings for both Mandarin-speaking and English-speaking children (Chang, 2001; Huang, 2002; Ukrainetz et al., 2005).[10] As Huang (2002) indicates, children from age 3 to 13 widely use these devices to evaluate a narration. The cross-linguistic preferences that shown lead us to infer that it is easier for children to adopt lexical devices such as INT and EVA than to resort to other rhetorical means to convey their evaluation, for the use of INT and EVA requires less linguistic and cognitive capacities. By the same token, these preferences confirm Chang's (2001) finding on order of acquisition of evaluative devices, in which lexical devices are shown to be acquired earlier than other devices. Additionally, Huang observes that younger children use limited variety of INT and EVA; as they grow older, they use these devices in a more subtle way so that they can convey their evaluation more adeptly.

In Huang's (2002) work, she notes that EXN is used more often than CSE. Yet, a reverse ranking is obtained in our data. That is, our subjects tend to employ more CSE than EXN in both narrative tasks (Tables 4.27 and 4.28). The only speculation we have so far for such a discrepancy in research finding is the different methodology involved in studies. More studies, thus, cross-sectional as well as longitudinal, are needed to further unveil the way preschoolers use these evaluative devices.

Huang (2002) claims that less than 20 % of internal evaluation belongs to the category of FOM, while we detect that around 10 % of all evaluative devices belongs

to this category. [11] Regarding preference for this device, Chang (2001) points out that FOM is the last device to be acquired by her subjects. However, we detect that FOM is among the five most frequently used devices. More specifically, for both female and male preschoolers in our work, FOM ranks number 3 in the personal narrative task, but ranks number 5 in the fictional narrative task, which suggest that our subjects use FOM more often in the personal than in the fictional narrative tasks.

As mentioned earlier, our tasks base on different narrative genres which may involve fundamental differences in perspective building. In terms of perspective building, telling fictional narratives is more cognitively demanding for children for they need to adopt not only a narrator's perspective but also the story character's perspective, as Chafe (1994) states. Following this line of reasoning, we can account for the personal-narrative-task advantage obtained here. As has been said, it is easier for the narrator to interpret his/her own feelings/perspective, as is often needed in producing personal experience narratives, than to infer another person's/the story character's state of mind, as required in telling fictional stories.

4.3 Variation in Developmental Trajectory

Previous sections focus on the developmental path for overall incidence and variety of evaluation and that for each evaluative device. The present section aims at exploring the variation in developmental pattern for evaluative skills among our subjects. To this end, Ward's minimum variance method is adopted to ascertain if there is any difference in developmental pattern among our subjects. Accordingly, a hierarchical cluster analysis is computed on total number of evaluative devices produced per time point. Two developmental patterns emerge as the result of cluster analysis.

Among the twelve preschoolers, ten of them belong to the first group: CJY, CY,

KHC, LTC, TSY, CRS, TK, TYH, WTH, and LCF. On the other hand, LCY, and YK belong to the second group. As Figure 4.14 illustrates, preschoolers in the first group demonstrate gradual growth in the use of evaluation, whereas those in the second group exhibit rapid growth tendency. Results of ANOVA reveal Group main effect ($F = 12.838$, $p < 0.01$) and Age main effect ($F = 13.823$, $p < 0.01$), but no significant interaction (Table 4.33). Post hoc comparisons indicate that subjects in both groups significantly increase their use of evaluation, which is congruent with the findings for amount and variety of evaluative devices discussed in Section 4.2.1. Throughout the three time points, preschoolers in the first group use a greater number of evaluative devices than those in the second group.

Both groups mentioned above reveal ascending trends. The difference between them lies in the rate of increase rather than the general tendency. In contrast, in the longitudinal study by Chang (2000), there are three developmental trends identified for sixteen preschoolers: steady growth pattern, stable pattern and fluctuated pattern. Unlike Chang's research, our work identifies merely two developmental patterns; moreover, these two patterns are common in nature for they both display growth trend.

To account for the discrepancy in developmental patterns reported above, we have three speculations regarding (a) representativity, (b) task difference, and (c) cognitive and linguistic maturity. First, there are more subjects in Chang's study than in the present work (16 vs. 12), which leads us to concern whether our subjects are representative enough. The lack of different developmental patterns in our research could be attributed to limited subjects encompassed. Regarding the second speculation, we note that the narrative tasks involved in different studies are not exactly the same, which may lead to different results. As Schneider (1996) notes, task differences can affect both referential content and expressive aspects of narratives.

Third, Chang's subjects are younger than ours (Chang's age span 42 to 51 months vs. ours 65 to 71 months), which means that her subjects could be less advanced than our subjects in terms of cognitive and linguistic capabilities. The greater variation among Chang's subjects, however, may be explicable for children of younger age are still groping their ways in using evaluative language skills, whereas children around age 5;6 may begin to follow a common trend in which a steady growth is shown.[12]

Additionally, the similar developmental trajectories among our subjects can be substantiated by the findings from Ukrainetz and her colleagues' (2005) study. Their study examines the development of expressive elaboration from children 5 to 12 years and finds developmental changes with ages combined into three clusters.[13] Children in our study, aged from 5 to 6, happen to fall into the same cluster; therefore, they tend to demonstrate similar developmental tendency for the use of evaluative language. These above-mentioned explanations should be regarded as speculations which need to be further confirmed by studies with a larger, more representative sampling pool and a longer observation span.

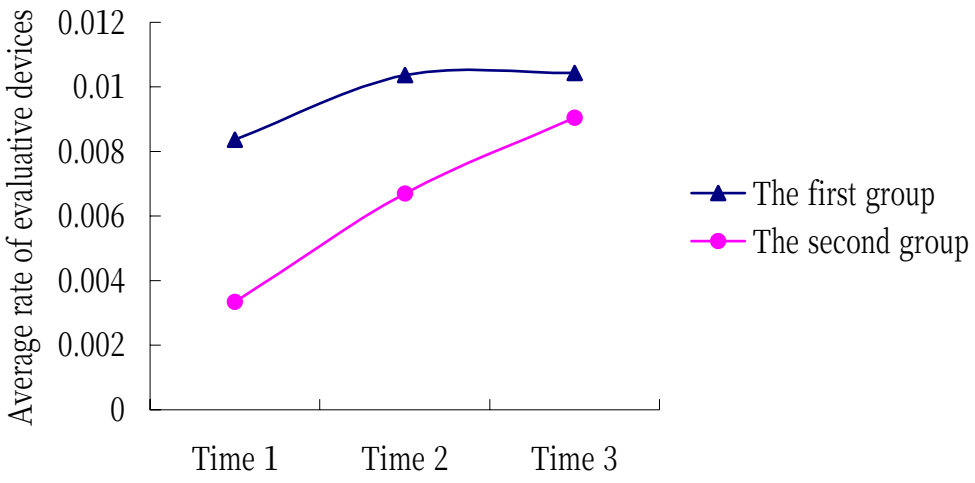

Figure 4.14 Developmental trajectories for different groups of children

NOTES

[1] To better discuss the findings, we present all the tables for this chapter in Appendix B.

[2] The discussion here is based on the results from three-way ANOVA.

[3] Huang (2002) detects an increasing trend for the variety of evaluation, though the differences in variety among time points fail to reach significant level.

[4] Wang (1998) investigates Mandarin-speaking children's development of narrative skills, with special focuses on referring terms and connectives. She notes that there are three stages of the development of referring terms and connectives by children aged from 3 to 7.

[5] Chang's (2000) work displays a growing trend for this device. In the other work, Chang (2001) points out that FOM is the only device which displays significant Age main effect.

[6] As Bamberg and Damrad-Frye (1991: 698) state: " this stance is best characterized in terms of not really knowing what is going on, and consequently having to rely on inferences – which in turn have to be elaborated in order to be understandable."

[7] Sound modification is one kind of paralinguistic strategies. According to Reilly (1992), very young children rely more on paralinguistic means than on linguistic ones in presenting affection. As they grow older, there is a trade-off relationship between these two types of means. That is, the use of linguistic means takes precedence over that of paralinguistic ones. In an even later stage, when children's narrative ability is well-developed, there is an increase in the use of paralinguistic means, which suggests that children now can successfully combine the two elements in presenting a good story.

[8] Hudson and Shapiro (1991) postulate that preschoolers are aware of genre differences. In the preset work, however, we can only show that our preschoolers are aware of task differences but cannot prove that they are also aware of genre differences. To make interpretation on genre effects, we need to control several complicating factors: the shared information between the narrator and the listener, the stimuli with or without pictures, and the topics. Such considerations are beyond the scope of the present discussions. Before any valid interpretation can be made, we need more investigations to further explore the issues on genre awareness or genre effects.

[9] For ease of comparison and discussion, we merely focus on the first five devices in each ranking.

[10] In Chang's (2001) framework, INT and EVA are termed lexical devices; in Huang's (2002) and Ukrainetz and her colleagues' systems (2005), these two devices are categorized as modifiers.

[11] On the basis of Labov's (1972) study, Huang (2002) makes distinctions between external evaluation and internal evaluation. External evaluation includes background information and quoted speech, whereas internal evaluation can be subcategorized into 'frames of mind' and 'syntactic level of evaluation'. The syntactic means encompass: causal connectors, potentiality indicators, enrichment expressions and paralinguistic features. In her work, Huang claims that, for children of ages 3 through 13, over 80% of their internal evaluation comes from syntactic level of evaluation; in contrast, less than 20% of internal evaluation comes from 'frames of mind'.

[12] Another possible factor which leads to different research findings in this regard may be the different analytical tools involved. Chang (2000) uses the individual growth modeling perspective to examine children's narrative skills, while our work adopts Ward's minimum variance method to detect the variation in developmental pattern.

[13] The three clusters are: 5-6 years, 7-9 years, and 10-12 years.