

Gender representations and stereotypes in Singaporean picture books: 1970 to 2008

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ABSTRACT

Research done in other countries has found that picture books under-represent females and contain gender stereotypes. Little research exists for the case of picture books published by Singaporean authors. Using a content analysis approach a random sample of 80 Singaporean picture books published from the 1970s to the present was coded. In particular the following elements were examined: male and female names in book titles and of main characters, male and female illustrations, and portrayal of males and females in outdoor and indoor scenes. The findings show that by the 2000s rough gender parity had been attained with one key finding being that the 1980s was a pivotal turning-point in the representation of gender. Two potential explanations are provided for why this might be so.

Keywords: Children's literature; Picture books; Gender stereotypes; Sexism; Singapore

INTRODUCTION

The aim of this study is to ascertain the level of gender representation in Singaporean picture books. Since, with one exception, no literature exists to document the Singaporean case, it examines picture books from the 1970s to the present on a decade-by-decade basis in order to identify trends in gender representation during that time. To achieve these aims a content analysis approach is used. Although numerous studies of gender representation in picture books for children have confirmed the existence of disparities in representation between males and females, the vast majority of this work is American focused using measures of book popularity that exclude most local publications (Anderson et al. 2006; Gooden and Gooden 2001; Kortenhaus and Demarest 1993; McDonald 1989; Kolbe and la Voie 1981, Weitzman et al. 1972). This is understandable given the national orientation of the authors and the size and importance of the US market and publishing industry. However, it remains an unfortunate situation as other socio-economic and cultural contexts may provide useful points for comparison or contrast to the American scene. And despite the small market or publishing industry size, such contexts are intrinsically valuable on their own terms. This is certainly the case for Singapore where the interaction between the country's changing socio-economic context and historical background has produced a climate alternating between support for gender equality and limitations to it. In general terms, the research question we address in this article is the extent to which gender equality (in terms of both representation and stereotyping) has been achieved in Singapore's literature for children.

LITERATURE REVIEW

Studies of gender representation in picture books are important due to their potential influence on the development of children. As Peterson and Lach (1990, p. 189) noted: "Picture books offer young children a macrocosmic resource through which they can discover worlds beyond their own life-space. The young child's sense of personal and gender significance is changed, influenced and connected to this world community through books written for them by adults". In one study, Tagnoli, Puller and Lieber (1994) found that boys gained a sense of entitlement while girls lost self-esteem through the depiction of gender found in a sample of popular children's books. In a review of twenty-one studies documenting the effects of sexist versus non-sexist children's educational materials, including books, Schau and Scott (1984) found evidence that the use of sexist materials consistently strengthened biases among children. Other studies have examined the effect of introducing non-sexist texts to children at an early age. These studies generally find that doing so decreases stereotypes of women, at least temporarily. Barclay (1974) found that a fifteen-minute daily exposure to books featuring women in a variety of occupational roles was more effective at changing attitudes than gender-neutral books. Similarly, Flex, Fidler and Rogers (1976) discovered that the use of egalitarian gender role models in stories reduced gender stereotyping, whereas Scott and Feldman-Summers (1979) found that the presence in a story of a successful gender role model in a particular occupation had a tendency to allow children to associate that gender with the occupation. The conclusion to be reached from these studies is that the portrayal of gender of children's picture book is an important component in creating a more gender-equal world.

Weitzman et al. (1972) were among the first to examine sexism in picture books. Using the winners and runners-up of the prestigious annual Caldecott award for best American picture book from the late 1960s to early 1970s they developed the theme of the 'invisible female' to account for their findings that males as main characters vastly out-numbered females. They also discovered differences in the activities and settings in which male and female characters appeared. Males were usually given active roles as opposed to passive ones for females. And males appeared more in outdoor settings than indoors. Weitzman also examined the kinds of roles played by adult males and females in picture books. Here they characterized the gendered differences as "men lead; women follow" (Weitzman et al. 1972, p. 1139).

Weitzman's study was followed by a multitude of others that further documented the disparities in gender representation. Scott (1981) examined two sets of basal readers (texts specifically written to teach reading by the progressive introduction and repetitive usage of new words) published in the United States in 1978 finding that the massive difference between male and female main characters noted by Weitzman et al. (1972) had decreased so that by 1978, 30.5% were female. However Scott also noted that in the sub-categories of adults and animal characters, females were still under-represented. Also problematic were changes in role behaviours. Although many examples of non-traditional roles could be found, they were also predominantly occupied by females. In other words, females had come to take on roles previously dominated by males (aggressive, competent, independent), but the reverse was not the case. Males were not depicted as exhibiting traditional female role behaviours (passive, nurturing, dependent). This finding was replicated in a number of other studies and appears a very ingrained aspect of gender representation in children's literature (Kortenhaus and Demarest 1993; Scott 1989).

While Scott examined gender differences in basal readers, Kolbe and la Voie (1981) replicated Weitzman's 1972 study using Caldecott winners and runners-up from 1972 to 1979. In particular they examined gendered differences in activities in terms of three dimensions: expressive/instrumental, significant/not significant, and stereotyped/not stereotyped. Characters were classified as participating in expressive activities if these "portrayed concern for the well-being of another, caring, affection, warmth, dependency" (Kolbe and la Voie 1981, p. Kolbe and la Voie 370). If, on the other hand, they engaged in activities that were "task-oriented, self-sufficient, somewhat competitive, and appropriately aggressive" there were labeled instrumental. Significant activities were those in which a character performed a major task in the story and stereotyped activities were those involving characters engaged in activities traditionally associated with their gender. Like Scott, Kolbe and la Voie found that main characters (as indicated by book titles) had evened out, but that for females "roles continue to be expressive, non-significant, and stereotyped" (p. 373).

A few years later, MacDonald published a study that "sought to determine whether treatment of the sexes had improved in children's picture books between 1976 and 1987" (MacDonald 1989, p. 392). To do so he examined Caldecott winners from 1976 to 1987 and a random sample of other, non-award winning picture books found on the shelves of the College of Education library at the University of Idaho. His finding that 58.02% of the characters in these stories were male and 68.42% of the central characters were male suggests that the "invisible female" of Weitzman's study was no longer an accurate summation of the state of children's publishing. But, once again, in terms of behaviour, stereotypes still prevailed with only 13.11% of the behaviours capable of being classified as "non-traditional" or progressive, leading MacDonald to conclude that "it appears picture books did not improve their treatment of the sexes" (p. 397).

Peterson and Lach (1990) observed that the calls for reform in picture books had apparently ceased by the end of the 1980s. They wanted to know if this silence was due to the attainment of equality of representation and studied a sample taken from the *Horn Book* (a well received US-based journal focusing on children's literature) booklists for three years (1967, 1977 and 1987) to find out. They concluded that "the approximate numbers of male and female main characters are nearing equality" (Peterson and Lach 1990, p. 187) and "more importantly, the discrepancy between the types of situations in which characters are portrayed is diminishing as well. Girls are just as likely to have adventures as they are to be shown in a domestic setting". Among the studies reviewed here, this is one of the most optimistic.

Most studies of gender representation in picture books chose to examine those considered to be the "best" as indicated by their status as Caldecott winners or runners up. Kortenhaus and Demasrest in their 1993 study added significantly to the literature by comparing Caldecott award books to a random sample of non-award books published from the 1940s to the 1980s and available at public libraries in Boston and New Jersey. But their findings once again echoed earlier studies. They "confirmed the trend of decreasing sexism in children's picture books" (Kortenhaus and Demasrest 1993, p. 228-229) in terms of gender balance in characters but stressed that in terms of roles, much remained to be done and that "the roles portrayed in children's literature do not represent an accurate representation or close approximation of the actual behaviours of males and females in our society" (p. 231).

Gooden and Gooden (2001) set out to compare the situation in the late 1990s with that analyzed by LaDow in a 1976 publication. To do so, they looked at a sample of books taken from the American Library Association's list of Notable Books for Children, for gender imbalances in main characters, illustrations, and roles. They found that although the number of female main characters had increased, this was not the case for illustrations which were still dominated by males. The number and kinds of roles also continued to be differentiated by gender.

Reinforcing Gooden and Gooden's conclusions, Hamilton et al. (2006) published a study that aimed to "assess gender bias in 200 top-selling children's picture books" (p. 759) published between 1995 and 1999. These included all Caldecott winners from 1995 to 2001 and the top selling picture books as enumerated by the *New York Times*, Amazon.com, Barnes & Noble, and *Publishers' Weekly*, among others. They found that female characters were still under-represented. Both males and females tended to have traditional occupations and that there had been no change since the 1980s in the numbers of males and females appearing in outdoor settings. Furthermore, they noted a reversal of previous gains in gender equality as nurturant behaviours in the 1990s were more closely associated with females than was the case in the 1980s. They conclude on the pessimistic note that "modern children's picture books continue to provide nightly reinforcement of the idea that boys and men are more interesting and important than are girls and women" (Hamilton et al. 2006, p. 764).

Gupta and Lee (1990) provided the only study known to the authors of sexism in Singapore children's literature. They studied the Ministry of Education approved early school readers, however, not picture books. Nevertheless, a review of their findings is instructive. In their sample, Gupta and Lee found 70 percent of the characters in the readers were male; that male characters tended to speak more than females; and that occupational roles for females were severely restricted while non-occupational roles were less so. They also examined kin relationships which, they note, are frequently described in terms of ownership. Here they found that females almost never "own" males, but are much more often "owned". They conclude that the inequalities in the representation of males and females "results in a diminished portrayal of females in every sense – numerically, in terms of their prominence in the narrative, and in terms of their participation in a small number of stereotypically appropriate occupational and social roles" (p. 45). Given that, as Gupta and Lee noted, one of the aims of the Singapore government is to encourage the participation of women in the workforce, the level of inequality in these Ministry approved readers is remarkable. Determining whether the same is true for picture books in general is the aim of the rest of this article.

METHOD

Selection of Books

Singapore began to publish significant numbers of pictures books in the 1970s, hence this decade was the beginning point for this study. These books are available from the libraries of the National Library Board (NLB), which serves as a repository for locally published materials. To create a list of children's picture books published locally, we first collated the titles from five bibliographies on Singapore children's literature. Three of these bibliographies were published by the National Library Board while the rest were published by the Media Development Authority (MDA) as well as the National Book Development Council of Singapore (NBDC). As the bibliographies did not provide a complete listing of all

the local children's literature, we also searched the NLB catalogue with keywords and subject headings such as "Readers (Elementary)," "Singaporean fiction," and "Children's stories, English," and "Singapore juvenile fiction." Next, we expanded on the list by searching for other books written by the authors already on our list. We also searched the catalogue using the series titles of the books. From this list, we eliminated titles that were clearly not fictional picture books. We also eliminated poetry books and anthologies. A total of 624 titles were compiled which we stratified by decade published: 1970-1979, 1980-1989, 1990-1999 and 2000-2008. For each period, we randomly chose twenty titles, producing a final list of eighty titles. This sample size was chosen due to time and labour constraints. As our list was stratified into four periods, some of the books that we coded were by authors with multiple publications, for example, Chia Hearn Chek, Joy Cowley, Shamini Flint, and Adeline Foo. We decided not to exclude books from the same author as we wanted our sample to be representative of the actual range of books available on the shelves of a library. While the inclusion of multiple books by the same author can be viewed as distorting the results of the study by emphasizing the work of that author to the exclusion of others, it also reflects the situation that confronts the child choosing a book and in more general terms, the visibility of the author in the marketplace.

Measures

We used a content analysis approach similar to that used by other researchers on the topic, such as Weitzman et al. (1972) and Gooden and Gooden (2001). In the content analysis approach, the researcher examines artefacts of communication such as documents or transcripts to identify special characteristics of messages in an objective and systematic manner (Berg 2007). In particular, we were interested in measures of female representation and stereotyping. For the former, following Kortenhaus and Demarest (1993), we counted: males and female names in titles; male and female main characters; male only and female only illustrations (that is, pictures that included only males or females); and the total numbers respectively of male and female humans and male and female animals in illustrations. Main characters were defined as characters appearing in fifty percent or more of the illustrations or who were pivotal to the storyline. Fairies, elves and bipedal aliens were all classified as human characters. The idea here is to identify measures that reflect the prominence of males or females in the books. Main characters are a fairly obvious indication of prominence, but titles and illustrations are equally so and hence make for good measures of gender representation.

To measure the degree of gender stereotyping, we used the approach by Weitzman et al. (1972) and Kortenhaus and Demarest (1993), and counted the following: indoor and outdoor activities of male and female children; and instrumental-independent and passive-dependent activities of all male and female characters. Weitzman et al. (1972) found that girls were more often depicted as being indoors, compared to boys in their study. Kortenhaus and Demarest (1993) classified commonly found activities in picture books as either instrumental independent or passive dependent. Instrumental independent activities were those demonstrating great amounts of self-initiated movement (i.e. climbing), decision-making (i.e. solving a problem), or creativity (making something). On the other hand, passive-dependent activities were defined as the opposite, that is, involving little movement (i.e. picking flowers), little decision-making (i.e. housework helping), and little creativity (i.e. caring for pets) as well as relying on others (i.e. needing help). Although such a scheme is somewhat subjective, we decided to adopt it to allow for future data comparison.

Coding

To determine inter-rater reliability, ten titles were randomly selected and coded by each coder. Table 1 summarizes the coding categories and the percentage of agreement between coders. For all but three categories, the coders were able to achieve at least 94% agreement in coding. For some of the illustrations, it was hard to distinguish between male and female characters, especially when they appeared in crowded scenes or when the characters were relatively small or not illustrated in great detail. Hamilton et al. (2006) encountered the same issue in their study. They noted that “the larger the numbers of character illustrations in a book, the more dissimilar the male-female character frequency counts were, in both absolute and proportional terms” (p. 760). The identification of particular instrumental independent and passive dependent activities also had relatively low agreements, being 65% and 80% respectively. This was due to the subjective interpretations of the specific activities being performed by the characters. Kortenhaus and Demarest (1993) also reported a low agreement of 65% for specific activities by the central characters. Hamilton et al. (2006) summed up the discrepancies by noting that “most of the disagreement fell among subjective items or items for which it was very difficult to obtain accurate counts” (p. 760). The initial determination of inter-rater reliability sensitized the coders to the problems of coding such activities so cases where they experienced doubt were only classified after discussion and debate with the rest of the team.

Table 1: Inter-rater Reliability

Identification of	Agreement in coding
Male & female characters in titles	100%
Male & female characters as main characters	100%
Male & female human (or human-like) characters in illustrations	90%
Male & female animal (or non human nor human-like) characters in illustrations	97%
Male & female main characters in indoor activities	95%
Male & female main characters in outdoor activities	95%
Instrumental-independent activities for all male & female characters	65%
Passive-dependent activities for all male & female characters	80%

FINDINGS

If we first look at the ratio of male and female names appearing in the titles of the sampled books we find that it declines over time: from a high of 2.7:1 in the 1970s it reaches parity in the 2000s (see Table 2). We find roughly the same trend at work if we count main characters instead. From 2.9:1 in the 1970s it falls to 1.4:1 in the 2000s with its lowest ratio (1.2:1) found in the 1990s. However, with the exception of the 1970s and 1980s, counts of main characters were found not significant using a chi square goodness of fit test. This suggests that the differences between male and female characters for the 1990s and 2000s are likely only the product of random variation in the sample.

Another measure of representational equality is the ratio of male to female only illustrations. That is, the number of illustrations depicting males with no females present and the number depicting females with no males present. Table 3 presents these ratios with the results of the chi square goodness of fit tests for each. It can be seen that here again there has been a movement towards representational equality. The ratio in the

2000s stands at 2.9:1 whereas in the 1970s it was 6.4:1. However, the difference between this series and the title and main characters is that while the later experiences a more gradual decline and ends in equality, the former rapidly descends to its lowest ebb (2.2:1) in the 1980s and remains at roughly the same level over the next three decades. Rapid initial progress in gender representation equality is followed by stagnation as the ratio in the 2000s is still close to 3:1 against female representation. All the ratios here were found to be significant.

Table 2: Ratio of Males to Females in Titles and as Main Characters
(numbers in brackets show the raw figures)

Category	1970-1979	1980-1989	1990-1999	2000-2008	1970-2008 average
Titles	2.7 : 1 (8 : 3)	1.8 : 1 (7 : 4)	1.3 : 1 (4 : 3)	1 : 1 (4 : 4)	1.6 : 1 (23 : 14)
Chi square	1.46	.36	N/A	N/A	
Significance	.2269	.5485	N/A	N/A	
Main characters	2.9 : 1 (26 : 9)	2.2 : 1 (22 : 10)	1.2 : 1 (17 : 14)	1.4 : 1 (21 : 15)	1.8 : 1 (86 : 48)
Chi square	7.23	3.78	.12	.7	
Significance	.0068	.0519	.729	.4028	

Table 3: Ratio of Males Only to Females Only Illustrations

Category	1970-1979	1980-1989	1990-1999	2000-2008	1970-2008
Illustrations with males only	140	87	110	108	445
Illustrations with females only	22	39	33	37	139
Ratio (males to females)	6.4 : 1	2.2 : 1	3.33 : 1	2.9 : 1	3.2 : 1
Chi-square	84.5	17.54	40.4	33.8	
Significance	<.0001	<.0001	<.0001	<.0001	

We also calculated separate ratios for illustrations of male and female human or human-like creatures and animals (Tables 4 and 5). For human or human-like creatures we found a gradual decline from 1.8:1 in the 1970s to 1.3:1 in the 2000s.

Table 4: Ratio of Male to Female Human Illustrations

Category	1970-1979	1980-1989	1990-1999	2000-2008	1970-2008
Illustrations of human males	353	306	264	226	1149
Illustrations of human females	193	194	210	173	610
Ratio (males to females)	1.8 : 1	1.6 : 1	1.3 : 1	1.3 : 1	1.9 : 1
Chi-square	46.3	24.64	5.92	6.78	
Significance	<.0001	<.0001	.015	.0092	

Table 5: Ratio of Male to Female Animal Illustrations

Category	1970-1979	1980-1989	1990-1999	2000-2008	1970-2008
Illustrations of animal males	175	244	173	83	675
Illustrations of animal females	22	136	87	9	254
Ratio (males to females)	8 : 1	1.8 : 1	2 : 1	9.2 : 1	2.7 : 1
Chi-square	117.28	30.12	27.78	57.92	
Significance	<.0001	<.0001	<.0001	<.0001	

For animals, however, the decline was much steeper, dropping from 8 : 1 in the 1970s to 2 : 1 in the 1990s, with ratios all significant. Interestingly, the ratio shot back up to 9.2 : 1 in the 2000s. In this decade four of the sampled books had large numbers of male characters and very few female ones: *Papa Bear's Holiday Adventure*, *Russell's New Friend*, *The Cat and the Rat*, and *The Falling Raindrop*. But even if these are removed from the sample, the ratio only decreases to 7.9 : 1. Of course, it is currently impossible to tell if this result is an aberration or the start of a trend.

A number of authors have noted that males in picture books tend to be placed in outdoor scenes whereas females appear more often indoors (Weitzman et al. 1974; Hamilton and Anderson 2006). This was not the case in our sample. Males outnumbered females in both indoor and outdoor settings in the 1970s. Tables 6 and 7 present the Singaporean data. We see a gradual decline over the years in the ratio of males to females in indoor scenes yielding to a situation of equality (1 : 1) in the 2000s. For outdoor scenes the decline is

quicker, moving to a 1 : 1 ratio in the 1980s and staying at roughly the same position thereafter. These trends are confirmed by the chi square goodness of fit tests. In the case of indoor settings, only the first column (the 1970s) comes close to registering a significant difference between observed and expected outcomes, suggesting that the differences in the ratios for the other decades are largely due to random variation. Similarly, the difference between males and females in the 1970s for outdoor scenes was found to be significant, but not the other ratios. Again, this suggests that equality in gender representation in outdoor scenes was present as early as the 1980s.

Table 6: Ratio of Male to Female Indoor Activities

Category	1970-1979	1980-1989	1990-1999	2000-2008	1970-2008
Indoor activities males	25	18	22	25	90
Indoor activities females	14	11	18	25	68
Ratio (males to females)	1.8 : 1	1.6 : 1	1.2 : 1	1 : 1	1.3 : 1
Chi-square	2.56	1.24	.22		
Significance	.1096	.2655	.639		

Table 7: Ratio of Male to Female Outdoor Activities

Category	1970-1979	1980-1989	1990-1999	2000-2008	1970-2008
Outdoor activities males	42	26	25	31	124
Outdoor activities females	18	26	23	28	95
Ratio (males to females)	2.3 : 1	1 : 1	1.1 : 1	1.1 : 1	
Chi-square	8.82				
Significance	.003				

In a final measure of gender equality in representation, we counted the number of times males and females were engaged in instrumental-independent tasks and passive dependent ones using the scheme developed by Kortenhuis and Demarest (1993). Tables 8 and 9 present this data broken down into individual activities while Tables 10 and 11

consider the totals. Examining the instrumental- independent totals first (Table 10), we find that from a high of 4.8 : 1 in the 1970s, the ratio drops rapidly to 1.5 : 1 in the 1980s., 1.9 : 1 in the 1990s, and back to 1.5 : 1 in the 2000s. The 1970s value was found to be significant, the others were not (although the 1990s value comes close), hence gender equality may have been achieved by the 1980s. In the case of passive-dependent activities, the ratio declines from 1.7 : 1 in the 1970s to approximately parity in the 1990s at 1.1 :1 (Table 11). However, none of these differences are significant.

Table 8: Ratio of Male to Female in Instrumental Independent Activities
(numbers in brackets show the raw figures)

Instrumental-independent activities (activities requiring relatively more movement, decision-making, and creativity)	1970s	1980s	1990s	2000s	Total
Playing a ball	(0:0)	(1:0)	(2:1)	(2:0)	(5:1)
Riding bike or horse	(1:0)	(1:2)	(0:0)	(3:1)	(5:3)
Climbing	(1:0)	(0:0)	(2:1)	(2:3)	(5:4)
Running	(0:0)	(1:0)	(6:5)	(7:5)	(14:10)
Swimming/ Fishing	(1:0)	(1:2)	(2:1)	(2:0)	(6:3)
Helping others	(1:0)	(7:4)	(4:3)	(0:2)	(12:9)
Making something	(1:2)	(3:2)	(3:2)	(2:1)	(9:7)
Solving a problem	(3:0)	(2:1)	(4:2)	(3:4)	(12:7)
Other instrumental-independent activities	(1:0)	(2:2)	(6:2)	(21:8)	(30:12)
Total average ratios	4.5:1 (9:2)	1.38:1 (18:13)	1.71:1 (29:17)	1.75:1 (42:24)	1.75:1 (98:56)

Table 9: Ratio of Male to Female in Passive Dependent Activities
(numbers in brackets show the raw figures)

Passive-dependent activities (activities requiring relatively less movement, decision-making, and creativity)	1970s	1980s	1990s	2000s	Total
Playing House	(0:1)	(1:1)	(0:0)	(0:0)	(1:1)
Picking Flowers	(0:1)	(0:0)	(0:1)	(0:0)	(0:2)
Housework Helping	(0:2)	(1:2)	(2:5)	(0:0)	(3:9)
Caring for sibling	(0:0)	(0:0)	(0:0)	(1:1)	(1:1)
Caring for pet	(0:0)	(2:1)	(1:0)	(1:0)	(4:1)
Watching others play	(0:0)	(0:2)	(0:1)	(0:0)	(0:3)
Needing help	(1:1)	(3:4)	(3:2)	(3:2)	(10:9)
Causing a problem	(1:2)	(3:1)	(3:3)	(1:0)	(8:6)
Other passive-dependent activities	(1:0)	(1:1)	(0:2)	(2:5)	(4:8)
Total average ratios	0.43:1 (3:7)	0.92:1 (11:12)	0.64:1 (9:14)	1:1 (8:8)	0.78:1 (31:40)

Table 10: Instrumental-independent Activities (totals)

Category	1970-1979	1980-1989	1990-1999	2000-2008	1970-2008
Instrumental-independent activities males	38	28	24	38	128
Instrumental-independent activities females	8	19	13	26	66
Ratio (males to females)	4.8 : 1	1.5 : 1	1.9 : 1	1.5 : 1	1.9 : 1
Chi-square	18.28	1.36	2.7	1.9	
Significance	<.0001	.2435	.1003	.1681	

Table 11: Passive-dependent Activities (totals)

Category	1970-1979	1980-1989	1990-1999	2000-2008	1970-2008
Instrumental-independent activities males	6	13	8	6	33
Instrumental-independent activities females	10	15	9	8	42
Ratio (females to males)	1.7 : 1	1.2 : 1	1.1 : 1	1.3 : 1	1.3 : 1
Chi-square	.56				
Significance	.4543				

DISCUSSION

This study examined nine measures of gender inequality in Singaporean picture books. The results are summarized in Table 12. Overall it is clear that much progress has been made in reducing gender representation inequalities since the 1970s. Only in the area of illustrations are gender disparities still clearly a problem. Although the ratio for male/female only illustrations improved dramatically during the 1980s, since then there has not been sustained progress. For animal illustrations the situations appears even worse as the sharp rise of registered in the 2000s has brought the ratio back to its 1970s levels. Titles, outdoor settings, and instrumental-independent activities, however, are all now much more equal than previously. And the differences between genders in terms of outdoor settings and passive-dependent activities were never significant, even in the 1970s.

Table 12: Summary of Findings

Titles	Not significant
Main characters	Not significant from 1980s onwards
Male/Female only illustrations	Significant for all decades; sharp decline from 1980s onwards
Human illustrations	Significant for all decades; stable from 1990s
Animal illustrations	Significant for all decades; sharp decline from 1980s; sharp rise in 2000s
Indoor Settings	Not significant for any decade
Outdoor Settings	Not significant from 1980s onwards; sharp decline from 1980s onwards; stable from 1980s onwards
Instrumental-independent activities	Not significant from 1980s onwards; sharp decline from 1980s
Passive-dependent activities	Not significant for any decade

Of course, we must be careful not to over-state the case for the results of this study. As a number of authors have noted, sexism manifests itself in myriad ways. Jackson and Gee (2005), for example, using a post-structuralist approach, analyzed the illustrations found in a sample of New Zealand early school readers, and found a number of differences between males and females in terms of posture, stance, and gesture which they link to stereotyped ideas about the status and competency of each gender. Kortenhaus and Demarest (1993) referred to other problems of representation: the absence of fathers in picture books. These examples move beyond a basic gender dichotomy to examine the wider roles males and females play in society and whether they find representation in picture books. It could very well be the case that these more subtle forms of gender mis-representation are characteristic of the Singapore case. Only further research will be able to tell.

One issue that does seem clear, however, is the pivotal role of the 1980s in the changing nature of children’s picture books (see Table 12). Many of the indicators reached a plateau in the 1980s. For most this was at a level close to equality, but for a few, the level was still far from ideal. The question that naturally arises is what social forces were at work during that period to reduce inequalities to a great extent, but retard further progress afterwards? This is a difficult question and the answers cannot be explored fully in this article. What follows then is tentative speculation derived from a reading of Singapore’s social and economic history.

Singapore’s position along a major ocean trade route from India to China has made it a centre of migration from those countries for centuries. Alongside the native Malays, Indians and Chinese comprise Singapore’s major ethnic groups (Trocki 2006, p. 40). However, in terms of numbers, it is the Chinese who dominate, representing 76.8% of the population according to the 2000 census (Leow 2001). Hence any discussion of the changing role of women in Singapore needs to begin with an understanding of Chinese attitudes to women. Hill Gates argues that the historical legacy of female oppression in China stems back to the Song dynasty (960 to 1279 AD), a time when the development of a neo-Confucian philosophy that stressed the subordination of women was put to work to legitimize the denial of women control of economic resources and, in fact, increasingly turning them into commodities (Gates 1989). Given the centralized nature and strength of the Chinese state it is not surprising that these attitudes were entrenched over the centuries (Greenhalgh 1985, p. 265) and included practices of female infanticide, foot-binding, denial of inheritance rights, and the exchange of women for money (in marriage, adoption, or outright sale).

When Chinese merchants and laborers ventured overseas they exported many of these notions about the role of women in society. Under the British in Singapore, many of the most egregious customs were prohibited, but the inferior position of women in society was not really challenged until the revolutionary years leading up to full independence in 1965. The PAP (People's Action Party), led by Lee Kuan Yew, wanted to secure the votes of women and included in its promises for an independent Singapore a Women's Charter which was passed when the party achieved control of the colony's domestic affairs in 1961. The Women's Charter gave women legal rights to family property as well as outlawing polygamy outside of Islamic marriages. The government also mandated equal pay for equal work in the civil service a year later as well as allowing married women to be included as permanent staff while towards the end of 1968 the educational system was changed to allow girls as well as boys to take technical studies (Lan and Lee 1997). These initial reforms continued in the 1970s with the introduction of the Foreign Domestic Maid Scheme in 1978, aimed to allow working women to balance home responsibilities with those of the workplace. And its "stop-at-two" program, while ostensibly directed at Singapore's high rate of population growth, was also a spur to increased labour force participation by women and a force tending to break down gendered distinctions between private and public space (Turnbull 1997).

All of these reforms were directed to the purpose of creating a modern and prosperous Singapore and not for any abstract notion of justice or human rights. In fact, despite these reforms, the legacy of neo-Confucian thinking still lurked. Citizenship was only granted to foreign women marrying Singaporeans and the government continued to make distinctions in the treatment of male and female civil servants in terms of benefits to dependents. It also capped the number of female medical students at thirty percent of the number of male students citing as a reason the waste of human resources that occurred when women were torn between husbands, children and the sick (Lan and Lee 1997). Hence over the course of the 1980s as the government realized that its population policy was perhaps too successful and that the country faced a severe labour shortage and a growing population of elderly people who would need to be cared for in the future, the economic incentive that had initially encouraged the emancipation of women through schemes for maids and reduced birth rates evaporated. While the government realized that women were still essential elements of the workforce it began to encourage them to have three or even more children, if they could afford to do so (Turnbull 1997). It also refused to significantly extend the nation's welfare net to adequately accommodate the growing numbers of elderly, the care of which has been passed on to families. Ideologically, the justification for this has been the filial obligations of Confucian thinking, but the result has and will be felt mostly by women who are the primary caregivers in the family (Asher and Nandy 2008).

Overall then we can discern a pattern in which there was a strong economic argument for the emancipation of women from the 1960s up to sometime in the 1980s. Women were needed in the factories and offices of a fast industrializing country and the rapid growth of population had to be curbed in the interest of economic development. Such pragmatic rationales disappeared after the 1980s as the population growth rate declined and the number of elderly began to soar. In fact, it would appear that the incentive is now to get women to return to the roles traditionally ascribed to them by neo-Confucian thought. Coupled to this is another trend, what could be described as a reaction to rapid economic development that has engulfed Singapore's people. As the title of Lee Kuan Yew's memoirs suggests, *From Third World to First: the Singapore Story: 1965 to 2000*, Singapore has made the journey from developing to developed country in the space of less than two generations. While few would doubt that Singapore's population as a whole is better off

now than in the 1960s, the rapid pace of development has its own cost; namely, a sense of alienation and dislocation. Kong and Tay write about this “underside” of development in the context of children’s literature, arguing that since the 1980s the tendency has been for Singapore’s authors to create nostalgic visions in the stories they write (Kong and Tay 1998). These visions contrast the peaceful, idyllic, and communal orientation of the past with the busy, jarring, and individualistic present. Furthermore, they note that nostalgia was not confined to the field of children’s literature but was increasingly a factor from the late 1980s onwards in popular music, theatre, and the renewed popularity of “old” leisure activities such as ballroom dancing. Even the state has participated in the creation of these nostalgic visions, according to Kong and Tay, exhorting Singaporeans to be proud of their history and, more concretely, engaging actively in the conservation of Singapore’s remaining colonial era buildings – all from the mid 1980s onwards. If Kong and Tay’s analysis is correct, it suggests that another reason the 1980s was a pivotal decade in the portrayal of females in Singaporean children’s literature was precisely because this decade saw the culmination of Singapore’s ambition to catch up to the West and an increasing reaction to the rapidity of change that success brought about.

CONCLUSION

This article has examined a random sample of Singapore’s picture books published between 1970 and 2008 for several measures of gender representation and stereotyping. It found evidence of gender inequality especially pronounced in the 1970s, but much less in succeeding decades. By the 2000s, gender parity appeared to exist in most measures, with the exception of those involving illustrations. These findings are contrary to those of many studies conducted in the West (and the one study done in Singapore). Of course, it is by no means conclusively proven that Singapore’s picture books are free from sexism. More subtle forms of gender misrepresentation and stereotyping could be at work. Future research should address this possibility.

The findings of our study clearly suggest that the 1980s were a pivotal decade in terms of changes in the representation of women in Singaporean children’s picture books. One potential reason why this decade features so prominently in the trends of the various measures examined here is the changing socio economic climate that Singapore’s development has produced. From a society striving to modernize and utilize to the full its human resources while reducing population growth, Singapore has become a wealthy developed nation with an ageing population. The economic incentive for the further progress in gender equality is now much less. Adding to the pressure for change are the feelings of loss and alienation occasioned by this same economic development; feelings that have contributed to a longing for the supposedly simple and wholesome times of the past.

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APPENDIX 1: LIST OF SAMPLED BOOKS BY DECADE

1970s

- Chan, K. I. 1978. *The tortoise and the worm*. Educational Publications Bureau: Singapore.
- Chan, K. I. 1978. *Ah Lee the roadsweeper*. Educational Publications Bureau: Singapore.
- Chan, K. I. 1979. *The stranger*. Educational Publications Bureau: Singapore.
- Chia, H. C. 1972. *The magic princess*. Federal Publications: Singapore.
- Chia, H. C. 1975. *The angry gods: A Tibetan folktale*. Federal Publications: Singapore.
- Chia, H. C. 1976. *The Raja's crown*. Federal Publications: Singapore.
- Chia, H. C. 1977. *Princess Alitaptap: A Philippine folktale*. Federal Publications: Singapore.
- Chia, H. C. 1977. *Sohrab and Rustum*. Federal Publications: Singapore.
- Li, K. D. 1977. *Good friends*. Educational Publications Bureau: Singapore.
- Li, K. D. 1977. *Story about teeth*. Educational Publications Bureau: Singapore.
- Lim, C. 1978. *The Choom-Choom-Tokkee*. Educational Publications Bureau: Singapore.
- Lim, C. 1979. *The greedy boatman*. McGraw-Hill: Singapore.
- Lim, C. 1979. *The rich young man's dreams*. McGraw-Hill: Singapore.
- A man with four legs*. 1979. Seamaster Publishers: Singapore.
- The monkey and the tortoise*. 1979. Seamaster Publishers: Singapore.
- Lim, S. C. 1979. *The valley of golden showers*. EPB Publishers: Singapore.
- Raju and his bicycle*. 1978. Educational Publications Bureau: Singapore.
- Tan, P. M. 1978. *Hasnah and the doll*. Educational Publications Bureau: Singapore.
- What a sorry monkey*. 1978. Educational Publications Bureau: Singapore.
- Wen, Y. H. 1977. *The armadillo and the leopard*. Educational Publications Bureau: Singapore.

1980s

- Chen, C. 1980. *Precious friendship*. Educational Publications Bureau: Singapore.
- Chen, C. 1982. *Grateful little mouse*. Educational Publications Bureau: Singapore.
- Chen, C. 1982. *How bear got out of the pit*. Educational Publications Bureau: Singapore.
- Chen, C. 1983. *Lie no more*. Educational Publications Bureau: Singapore.
- Chia, H. C. 1980. *John's new toy*. Pan Pacific Book: Singapore.
- Chia, H. C. 1980. *Pepy and the Peacock*. Educational Publications Bureau: Singapore.
- Chia, H. C. 1983. *Traffic jam*. Book Emporium Singapore: Singapore.
- Chia, H. C. 1985. *Mother mother*. Book Emporium Singapore: Singapore.
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- Hai, S. 1983. *The Lilliputans*. Singapore News & Publications: Singapore.
- Hong, S. 1983. *The space girl*. Singapore News and Publication: Singapore.
- Ooi, O. 1987. *Ditto's happy day*. Graham Brash Pte. Ltd: Singapore
- Ooi, O. 1987. *Puteh helps little frog*. Graham Brash: Singapore.
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- Robin, T. 1987. *Afternoon tea with Chimpee*. EPB Publishers: Singapore.
- Robin, R. 1989. *Sandy the lovable seal*. Educational Publications Bureau: Singapore.
- Wee, J. 1987. *Monty moves out*. Federal Publications: Singapore.
- Wee, J. 1988. *Monty goes to school*. Federal Publications: Singapore.
- Wong, M. 1984. *Mr Singh the policeman*. Singapore News & Publications: Singapore.

1990s

- Amore, A. 1996. *Princess Momo*. EPB Publishers: Singapore.
Amore, A. 1996. *We have a clue*. EPB Publishers: Singapore.
Appleyard, J. 1992. *Raffles by the river*. EPB Publishers: Singapore.
Appleyard, J. 1994. *Raffles happy birthday*. EPB Publishers: Singapore.
Bubbles goes to school. 1997. Early Childhood Publications : Singapore.
Cowley, J. 1992. *The lost buffalo*. Heinemann Asia: Singapore.
Cowley, J. 1996. *Monkey tricks*. Heinemann Asia: Singapore.
Cowley, J. 1997. *Helping*. Heinemann Asia: Singapore.
Cowley, J. 1996. *The pirate's treasure*. Heinemann Asia: Singapore.
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Koh, P. 1997. *Five stones*. A-story-a-day Production House: Singapore.
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Lim, S. C. 1991. *Grandpa the collector*. EPB Publishers: Singapore.
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Ooi, O. 1995. *My grandmother's clogs*. EPB Publishers: Singapore.
Wee-Ha, M. 1995. *The ducklings at the beach*. EPB Publishers: Singapore.

2000s

- Beale, F. 2001. *Jealous Ju Long*. Pearson Education Asia: Singapore.
Choo, K. Y. 2006. *All because of the hummingbird...or the horse*. Choo Kah Ying: Singapore.
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Tang, G. 2004. *Grandma's kites*. Beacon: Singapore.
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Thung, S. Q. W. 2005. *The silent teacher*. Federal-Marshall Cavendish Education: Singapore.
Wee-Ha, M. 2003. *Papa bear's holiday adventure*. System Pub House: Singapore.
Yiu, F. 2004. *The puppy*. Beacon: Singapore.