

Teachers conceptions of giftedness – what does it mean for young girls and boys?

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Abstract

This paper reports on a study that examined early childhood teacher's understandings of giftedness in young children and how these conceptions are shaped by their beliefs about gender. The research was prompted by an awareness of the underrepresentation of girls nominated for a University-based enrichment program run for gifted children 5-8 years-of-age. Overall, the enrichment program receives five times more nominations for boys than girls. Participants in this program are drawn from the metropolitan area of Brisbane, Australia.

The study employed a qualitative research approach, utilising phenomenography (Marton, 1981) and interpretive analysis. This approach allows the researcher to uncover the range of conceptions of particular phenomena through indepth qualitative interviews and to examine these from a gender perspective. A group of sixteen early childhood teachers were interviewed regarding their conceptions of the phenomenon of 'giftedness'. In analysing transcripts the researcher sought to answer the question 'How does this teacher see giftedness'? This led to the development of seven conceptions of giftedness arising directly from teacher descriptions (Lee, 1999). In the second phase of the research, the analysis turned to ways in which these conceptions of giftedness were shaped by beliefs about gender. Teachers were asked in the interview to describe what future scenario they envisaged for gifted girls and boys, and to distinguish if possible, between gifted girls and gifted boys.

Introduction

In this paper, the author will describe some of the findings and implications of a research project conducted in an effort to understand the underrepresentation of girls in a mathematics and science enrichment program operating at the Queensland University of Technology. Over a number of years, when state and private school teachers were invited to nominate children for enrichment, at least five times more nominations were received for boys than girls. In the study, sixteen lower primary teachers in Brisbane, Australia, were interviewed regarding their conceptions of giftedness, they were also asked to distinguish, if they could, between a gifted girl and a gifted boy. The research analysis was conducted in two phases, using phenomenographic and interpretive approaches. The first phase

of the analysis utilised a phenomenographic approach to the data and sought to answer the question "what are teachers conceptions of giftedness in young children?" findings of this first phase of the data analysis have been reported in a prior communication (Lee, 1999). The focus of this paper will be the second phase of the analysis, in which the researcher identified, through interpretive analysis, the gendered dimensions of the teachers' conceptions of giftedness. Specifically, the researcher drew on teacher utterances regarding the future scenarios of gifted girls and boys they knew, and the distinctions those teachers made between gifted boys and girls.

Methods

The research, which examines early childhood teachers' conceptions of giftedness, was undertaken using a novel qualitative research design. The design drew on phenomenographic methodology but extends this by also conducting an interpretive analysis of gender, synthesising this into the phenomenographic results. Whilst it is primarily a phenomenographic study, examining conceptions, it also seeks to interpret these conceptions in light of data relating to teachers' beliefs about gender. Conceptually, the research was conducted in two phases. First, the teachers' conceptions of giftedness were derived from the transcripts of data. This phase was essentially a discursive phenomenography (Hasselgren & Beach, 1997). These data were treated as independent of the planned gender analysis. After the phenomenographic analysis was complete, an interpretive analysis of data relating specifically to gender was conducted.

In the interpretive phase, coding or indexing of interview transcripts was undertaken by what Arksey and Knight (1999) describe as "producing some manageable, systematic guide" (p. 163) to the data. This involved reading and rereading the transcripts numerous times and highlighting references that related directly to questions regarding gender. In the next phase, these utterances were sorted into two computer files. References to the future scenarios of boys and girls were included in one file, all other references describing boys and girls specifically and those utterances in response to the interview question "what distinguishes a gifted girl from a gifted boy?" were included. These files were then put aside and the interview transcripts were revisited. The highlighted responses selected for inclusion in the two files of data were read and reread in the context

of the interviews to find patterns or common ideas among the teachers. Arskey and Knight (1999) describe these as "emerging themes" (p. 163). When these were identified, they were given short headings and alpha-numeric codes. Upon establishing some codes from the first few interview transcripts, subsequent interview transcripts were used to confirm, extend or refine the existing set and each transcript was assigned codes which were then applied to the computer files according to their code so that like utterances across the interviews could be collated. This process was repeated to ensure that early transcripts faithfully characterised the emerging codes of the latter interviews. Such an approach to the data is grounded, in the sense that it is "rooted empirically in the data" (Arksey & Knight, 1990, p. 164).

Sixteen participants took part in the study. They were selected on the basis of having successfully nominated a child for the Enrichment Network for the Very Young Programme operating at the Queensland University of Technology. The participants included male and female teachers from state and private schools. The teachers range in teaching experience from novice to those approaching retirement. The over-representation of female teachers currently employed in early childhood settings (cf. OECD, 1993), made equal gender representation among the participants impossible. Teachers were selected, however, to provide a balance between those nominating girls and those nominating boys for the programme. Interviews were conducted in the teachers' homes or at school over approximately one hour. After probing the teachers about their conceptions of giftedness two questions were presented to explore ideas about gender:

"From your experience with the children you have described today, what future scenario would you see for a gifted boy? A gifted girl?"

"What, if anything, distinguishes a gifted girl from a gifted boy?"

Further questioning was pursued in order to clarify answers. Responses were transcribed and the transcripts presented to the teachers for checking or modification before analysis as described above.

Results

What did the teachers say?

In order to analyse the data generated from the sixteen interviews, the researcher transcribed the audiotaped interviews and read the transcripts numerous times, highlighting references which included specific descriptions of boys and girls and also the teacher responses to the interview questions "what future scenario do you see for a gifted girl/boy" and "what, if anything, distinguishes a gifted girl from a gifted boy?". Throughout this paper, codes appear alongside quotes from interview transcripts, these indicate the interview and utter-

ance number, i.e. (I10:45) refers to interview ten, utterance number forty-five.

In describing gifted and talented children, teachers were asked to draw on actual experiences they had been involved in with children. It is important to note the overall picture of teacher talk in relation to boys and girls because, overall the teachers in this study talked about more boys than girls when asked to describe "a gifted child" they knew. Despite the fact that teachers were selected on the basis that half of them nominated girls for enrichment and half nominated boys, teachers chose to discuss more than one and a half times more boys ($n=37$) than girls ($n=22$).

The two male teachers in the study, whose combined years of teaching experience totals 44 years, claimed that they had never encountered an academically gifted girl in their entire teaching careers. One of these teachers described a girl who was gifted in playing football, however, no girl was identified by either teacher as being academically gifted. In this paper I will argue that many gifted girls are not identified by teachers and will propose an explanation for this. Recommendations about what can be done to bring girls' academic potential to the attention of their educators and to see them enriched and extended in their ability areas will also be made.

Describing Future Scenarios

When teachers were asked to describe the future scenarios they saw for the children that they had described, very clear gender expectations were evident. In some cases, teachers openly resisted this question, as in interview two where the teacher said to the researcher: "I don't particularly like the way you separated boy and girl there, I'd like to think that I don't separate them that much, perhaps I do, I don't know" (I2: 94). Similarly, a strong reaction to interview questions regarding gender arose in interview eight, during the interview, this teacher said "I don't see it as a boy/girl thing, I'm quite surprised at that sort of question" (I8:105) but went on to state that not one girl had been identified by him as gifted and talented in his 34 year teaching career.

Gifted girls and boys: where do their teachers say are they heading?

In relation to the future scenarios for girls and boys, a number of different types of responses emerged in the interviews. Firstly, some teachers in this study nominated specific futures for gifted children, identifying a career they felt the child was suited to or would excel in.

Secondly, a number of teachers spoke in more general terms about achieving success and making a contribution, rather than nominating a specific scenario.

Thirdly, some teachers spoke about the future of gifted children in terms of what they would *not* want to see them do.

Fourthly, a number of teachers were unable to speculate about the future of the gifted girls and boys they knew, some stating that they felt it was really too early in the child's development to make such a prediction. Most significant for this research is the fact that this inability to speculate about the child's future was reported most often in relation to the future of girls.

Following are some illustrative examples of the above styles of response to the question "what future scenario do you see for a gifted boy?" and "what future scenario do you see for a gifted girl?"

Specific Scenarios: Girls

In this category, the occupations listed by teachers as probable futures for the gifted girls they knew are included and where it is available, teachers' explanations for their choice is provided. During the interviews with teachers, the following career scenarios were depicted for girls:

A doctor, because the girl was "a very patient type of person" (I1:112)

"Medical things" (I1:115)

A teacher or a doctor because the teacher could see her "working more with people" (I6:88)

Working with people because "she'd want to be helping people and working with people and caring for people" (I6:89)

Get married and have children, alongside a career (I6:91,92)

An author, an actress or a musician (I7)

An art teacher (I9)

A children's television show host "thinking up ideas and noises and fun games" because "she's very childlike and enthusiastic...but in a lovely quiet manner" (I9:149)

A doctor (I11)

Would make a very good accountant but would probably pursue a career in biology or a job working with animals (I11)

Working with people or animals, possibly research or working with endangered species (I114).

In some responses, teachers indicated in a specific way, what they would not want to see in the future of the gifted girls they knew. These statements reflect a concern for underachievement and both relate to childbearing and childcare responsibilities in the future:

I just hope she doesn't fall into the same cycle as her family and her mum's mum...having children very young (I1:13,14)

I'm sure she will get married and have children and that, but I would hope that that's not all (I6:91)

Clearly, the future scenarios for the gifted girls described by teachers in this study reflects gendered expectations associated with the notion of femininity, nurturing, mothering, childcare. The girls who were identified as gifted in a range of academic areas were overwhelmingly seen by their teachers as having future careers in the helping professions, where the emphasis on 'working with people' reveals the teachers' beliefs regarding the nurturant, caregiving propensities of girls and women. A great majority of the girls referred to above have been identified as gifted in mathematics and science, of these, only one girl was seen to have a future in science and this was in the field of biology, a strand of science in which women's participation is more readily accepted and encouraged than the physical sciences (Wertheim, 1995).

The statements about what teachers did not want to see in the future related to girls' underachievement, not fulfilling their potential. In both the statements, parenting commitments were seen as a threat to achievement.

The picture the teachers had for the boys is significantly different as we will now see.

Specific scenarios: Boys

In contrast to the scenarios for girls, a very different and much more diverse picture of the future of gifted boys emerged in the analysis. The teachers saw boys doing the following things in their future:

Go to university "definitely" (I1:109)

Computing or law(I1)

Many options but probably research in medicine, science or physics because "he has the discipline and he's a loner" (I5:116)

Two boys discussed together were seen as probably attending private secondary schools followed by university education the first to become a pilot, the second a doctor or a scientist. In addition, this teacher saw both boys living in "really nice houses" with "nice wives and children" (I6:86, 87)

An academic field, probably engineering (I7)

A career in technology (I8)

Politics, because "he was quite up front" (I9:144)

An artist (I9)

A doctor (I9)

Engineering (I9)

A scientist or a chemist (I11)

A palaeontologist (I11)

An accountant (I11)

An academic in the science field (I12)

Science or research (I12)

A diplomat (I14)

A career in science or maths because "that seems to be the area they go into" (I16:67).

The boys identified by the teachers in the study have all been predicted to pursue a broad range of traditional masculine occupations. The exception is possibly the artist, who the teacher identified as being gifted in art. However, this boy's teacher also identified a girl who was gifted in art, but expected her to become an art teacher, not an artist.

A much greater emphasis on careers in physical sciences and technology is evident among the responses regarding boys. In addition, legal and political careers are noted. None of these options were considered for the gifted girls whilst on the other hand, none of the boys were expected to become teachers.

Statements about what teachers did not see or would not want to see the boys do in the future are exemplified in the following interview extract:

They wouldn't make very good, I wouldn't imagine they would make very good people feeling occupations...because I don't think they have the gift to speak to people, it's all very purposeful there's no, none of that personal touch I don't think. I want to talk maths, I don't want to talk about anything else, I don't want to know how you feel or what your day was like...I just want to talk about maths, or a science problem (I10:72,73)

In the statement above the teacher claims that boys aren't suited to or interested in entering into people oriented occupations because they are not interested in how people feel and don't know how to communicate. This highlights a stereotypic view of males and masculinity and reveals an underlying belief that the sexes are fundamentally different in disposition, interests and attitudes. The statement also subtly implicates mathematics and science as clinical disciplines that do not relate directly to people in any way. This teacher clearly sees mathematics and science as areas in which boys have an intense interest and reminds us that girls are not widely considered to be suited to mathematics and science careers because these fields are divorced from people's lives. In particular this reference to boys' preoccupation with mathematics is consistent with Willis' (1989) findings that boys tend to be seen as more 'mathematical'. What has been highlighted in this research then is the fact that "differences in educational and

occupational participation can be explained in part by perceptions of males as typically more mathematically able than females (Willis, 1989, p.14).

Unlike the statements about underachievement teachers made about girls in the study, no teacher mentioned or considered that the gifted boys they knew may underachieve for any reason. It is clear that teachers are much more certain about the future of boys and that some of them see girls as having more obstacles to realising their potential than boys.

Achievement in the future

A number of teachers in the study responded to the question of future scenarios in a more general way, their statements almost always referred to achievement in later life. Teachers who did not differentiate their responses for boys and girls made most comments in this category. Some illustrative examples are:

I would see those gifted people as having the ability to... come up with new ideas for businesses and products and or solutions to company problems and things like that (I2:94)

I would hope to see a gifted boy and I'd say girl as well as our problem solvers of the future and our inventors and our, those who are really making a difference in the world...I don't see a specific gender role for any of them and...I'd hope we'd have a gifted girl in top science sort of areas or top mathematics areas and that type of thing...I would definitely hope that they're up there making the decisions and doing the problem solving and all that sort of thing for our world (I4:66)

The above utterances emphasise the commonly held view among teachers in this study, that gifted children will achieve success in life.

The future isn't clear where girls are concerned

Some teachers in the study were unable or unwilling to comment on the futures of the gifted children they knew. Some felt that it was simply too early to tell about the future of boys or girls. However, another pattern emerged in the data. More often teachers found it difficult to be specific about the future of girls and in some cases, where teachers were highly specific about the future of boys, they were unsure of the future of the girls they knew. An example from the transcripts illustrates this:

I've got no idea where she'll end up but contributing something to the human race, I'm sure (I2:96)

The teacher participating in interview five gave a highly specific career path for the gifted year three boy she discussed, believing that he would have a research career in medicine, science or physics (see above I5:116) but when asked about the future of

the year one girl she had described, she said:

I only had her for a year, she was only five years of age, so I really couldn't make a judgement (I5:119)

A similar case occurred in interview ten, where the teacher had been specific about the boys she discussed being unsuited to people oriented occupations (see above I10:72), but when asked to talk about the future of a gifted girl, the teacher responded:

She's probably got it tougher because society is still an old fashioned society...I don't know for a girl... if a girl's going to be gifted in maths and science, she'll have her work cut out for her to really do what she wants to do...she'll have to fight all the way I think (I10:74, 78,79)

Generally, teachers report more specific futures for boys and experience uncertainty in their predictions about the future of girls. It is proposed that this arose from the following beliefs held by teachers in this study and revealed in the interviews:

- 1 that girls experience more barriers to careers in mathematics and science (I10)
- 2 that girls' experience pressure to conform to traditional gender specific careers (I3)
- 3 gender stereotypes regarding occupations prevail among young children (I3, I10)
- 4 gender socialisation occurs through families and the media (I3, I8, I13, I16)
- 5 girls' career paths are more likely to be interrupted by child bearing and childcare (I1, I4, I6).

Making the distinction: Gifted girl, gifted boy

Campbell and Verna (1998) found that "some teachers train themselves not to look for gender differences, and others make the point that they treat boys and girls the same, but, research in a variety of different settings paints a very different picture" (p. 5). The research reported in this section confirms this claim.

This portion of the analysis will discuss how teachers apply their beliefs about giftedness to young boys and girls and examines the ways in which teachers differentiate between young boys and girls who are gifted. Responses to the interview question "In your experience, what distinguishes a gifted boy from a gifted girl?" revealed a range of beliefs about gender and giftedness that will now be examined.

In describing gifted girls and boys a distinct pattern emerged among the teachers in this research. Patterns in the data illustrate the very different perspective teachers hold about boys and girls generally and how, according to teachers, gifted boys and gifted girls manifest their aptitudes in different ways. The following section will examine the ways teachers describe gifted girls and boys.

Gifted girls at school: Pleasing the teacher

Most often, gifted girls described in this study were described as being very pleasing to the teacher. The data analysis revealed that teachers saw gifted girls they knew as exhibiting strong helping, conforming, co-operative, adaptive and compliant behaviours. These descriptors were used in relation to gifted girls more than two and a half times as often as gifted boys. In every case, this was seen in a favourable way. In fact, where girls did not demonstrate these behaviours they were seen as 'bossy' or as in one case, a tomboy. In addition the gifted girls were described five times more often than their male counterparts as attractive in personality and appearance.

Examples of the ways teachers describe girls in this manner are:

She would do her best to, you know, help them along (the other children) or fit in with them... she was always doing the right thing and she was, um, seen to do the right thing. So socially she was just a great little girl, I mean I never had a problem with her (I3:42)

She was a lovely girl because she's that kind of nature, very gentle nature and very helpful...she did a lot of peer help, peer group tutoring...Anna was lovely, she'd, whatever you asked her to do, she'd do it...she wasn't a bored type of person either, she didn't throw her hand up and say 'this is boring', she was attentive...Anna didn't want to be a leader, Anna was quite happy to take a back seat (I11:31,32)

I think by the nature of girls, I think girls tend to be more ah, caring... they love doing jobs, they love helping, they love tutoring the other students, they love being the teacher, they love playing the game that they play at home with their dolls, you know? So they're very socialised towards an institution like this, you know, this is their sort of institution (I13:113)

Gifted boys at school: Acting out, getting noticed

Gifted boys, on the other hand, are described in many more instances (six times more often than girls) as outspoken, challenging the teacher or the status quo, difficult, uncooperative, unpopular and socially isolated. These characteristics, which were universally held by teachers in this study as indicators of giftedness, are both ones in which teachers draw on examples and experiences concerning boys in the vast majority of instances. This suggests that these conceptions of giftedness are in fact 'gendered' and afford boys more opportunities to be identified as gifted, than girls. Some examples from the transcripts of these descriptions are:

He was inclined to call out, to shout out to give all the answers and this upset the other chil-

dren...he doesn't socialise well (I12:11)

He believed in what he said and he knew he was right, therefore he had to tell you... he has to tell other people 'that's not the way, this is the way' (I12:18)

He would basically say, 'oh this is really boring, I don't want to do this'... he had a lot of trouble working with other people because he would say 'this is the answer and this is how you do it' and he didn't think what the other kids said was important, that was one reason why he didn't get on well with the other kids (I13:24,29)

Contrasting boys and girls

Behaviours

In many cases where girls are described in terms of their 'pleasing the teacher' behaviours, the teacher is in fact contrasting them with a gifted boy who is making his achievements known or is disruptive, bored and difficult. It is in these boy/girl comparisons that the gender distinction teachers make between gifted girls and gifted boys is most poignant. To illustrate how widely held this view is among the teachers in the study, a number of pertinent extracts from interview transcripts highlight the common comparison:

He's similar to Judy in, I think his ability would be similar to her, but he's at the opposite end, like whereas Judy would produce work, he'd paint his nails with the textas...he wasn't concerned with pleasing me, whereas Judy was really concerned with pleasing me, but James just didn't care ...you generally find that with boys anyway...they don't care if it pleases the teacher or not...whereas the girls really try to make sure that they're doing the right thing...I do think that wanting to please is definitely, I think, more of a girl ...um more of a girls trait than a boys (I1:51,52, 117,121)

Liam knows he's really bright and he'll tell everybody all the time, Hannah doesn't do that at all, I mean I guess she must know that she's good but she'd never say to anybody 'I got everything right'...she's just such a lovely little person and she knows how other people feel she wouldn't want other people to feel badly that they didn't do as well, I really believe that she does have that quality (I6:15,16)

The only thing I think with the girls that I would regard as clever, that they are often quiet and a little bit introverted so they don't come across as much as the boys, and therefore I think they can get lost more easily in the system because they don't make a noise, they don't jump up and down, they don't have to be corrected because they do their work and they're not inclined to complain about it that

much. Whereas I think boys will say they're bored with the work or they're finished, you know boys will not sit there and say well I'm finished that's good, they'll let you know, do you know what I mean? Whereas little girls are inclined to, I find, if they finish, well they'll read or they'll do something and that worries me a little bit in that I think they are more inclined to be lost in the system, more so than boys (I12:52)

These comparisons provide confirmation of the above themes of girls as the compliant teacher pleasers and boys demanding 'notice me' described above, however these latter statements of comparison bring into sharp contrast the ways in which teachers see gifted boys and girls in significantly different ways.

Perceived Gender Differences in Aptitudes and Interests

In some cases teachers compared gifted boys and girls in terms of their abilities, interests and aptitudes in different learning areas. Teachers described clear gender distinctions in these responses and identified 'traditional' areas of aptitude or differences in interests between boys and girls. Teachers consistently see the family and the community as the primary agents in the gendering process and do not directly implicate schools in any instance. Examples from the transcripts illustrate the distinction teachers in this study made:

I don't know that anything distinguishes them from each other, I guess from the kids that I've known more boys, I shouldn't say it, but more boys are probably talented maths wise, logically thinking wise, than girls are, more of the girls who I think have been talented or gifted are in the language side of it...not anything I can think of distinguishes them just the fact that they're a girl or boy I don't think makes any difference, I think that both boys and girls are quite capable of being gifted in any area (I2:100) (emphasis added)

(For a girl to be noticed by the teacher as gifted) it maybe would show up say in the art area or something in the physical area and some sort of games or other, I'm sure it could happen, it's just that I haven't seen it, I'm sure I haven't seen it (I8:116)

boys seem to be more interested in things like maths and science and sport, and the girls it sort of seems to be art and music and language sorts of things so that's the difference I've seen here, but it's not something I'd expect or encourage (I16:75)

In addition to the perceived gender differences in aptitudes and interests, several other differences emerge in the data in relation to boys and girls. In

the following section, I will examine areas in which teachers describe boys as possessing particular characteristics, which are rarely mentioned in regard to girls. However, a complementary discussion and analysis of references to girls is not possible, since the only characteristic girls are described as having in more instances than boys are those described above under the heading **Gifted girls at school: Pleasing the teacher**. All other characteristics discussed by teachers in this research referred predominantly to boys.

"A really talented boy is noticeable"

Gifted and talented boys, according to the perceptions of teachers in this research, are considerably more noticeable than their female counterparts in a number of significant ways. Firstly, boys are described by their teachers more than three times as often than girls as exhibiting eccentricities in behaviour including the 'mad professor' description used in several instances. In addition, unusual, strange or atypical gender behaviour is considered highly noticeable and, from the analysis in the previous section above, much more likely to be exhibited by gifted and talented boys who, according to this research, are more successful at being noticed. This is not a behaviour that is reported often about gifted and talented girls who appear, to their teachers, in most instances, as quiet and compliant. Secondly, teachers reported behaviours like assertiveness, taking initiative and leadership in boys twice as many times as girls. Finally, gifted boys are described as being noticeable by their mannerisms, actions or words almost four times more often than gifted girls. These results will be discussed in detail below.

The capacity to be noticeable is one way in which teachers differentiate gifted children from other children (Lee, 1999). Every teacher in this study saw giftedness as being highly noticeable. According to this gender analysis, boys are far more likely than girls to be noticeable by their behaviours and therefore identified as gifted by their teachers. It is argued that this offers a highly plausible explanation for the underrepresentation of girls in nominations for enrichment programs, because they are less likely to be noticed as gifted.

What makes children stand out?

A theme emerging from this analysis is that gifted children are sometimes described as odd, disorganised, 'naughty', eccentric or atypical. In a majority of references to these behaviours, reported in this study, these types of descriptors were used in relation to boys. An illustrative example is:

He's a real absent minded professor...his chair bag is always so full of mess and he could never find anything, always losing things (I6:20)

Atypical gender behaviour was described by teachers in relation to several boys and one girl. This behaviour includes preferring the company of the other sex rather than same sex peers, which usually entails being labelled a 'soft' boy, or for a girl, a tomboy. The notion of resistance to sex/gender specific behaviour and expectations, appears to have been manifested quite clearly by some gifted children described by teachers in this study. It can be seen from the extract from interview seven below that this resistance to gender stereotypes is itself noticeable but in the case of Debbie described below, she eventually begins to succumb to the gendered expectations applied to her and conforms to feminine dress standards. No such change in atypical gender behaviour was reported in relation to boys. This suggests that unless this child's noticeably atypical behaviour (in this case her resistance to gender expectations) in early childhood is seized and acted upon as a possible signifier of early giftedness, her resistance may turn to compliance by the middle school years and thus the child may remain unidentified. Some examples from the transcripts highlight the nature of the utterances regarding children who did not conform to gender stereotypes:

Debbie would never ever wear a dress. She went to her stepsister's wedding...and refused to wear a dress so her parents had to hire a dinner suit for her... I mean a lot of little girls would love to wear a dress to a wedding. Her one concession was she wore a baseball cap that had sequins on it ...She's refused to wear dresses, she's starting to wear dresses now this year, she wouldn't do anything girly at all, she wanted to play with the boys all the time. She looked like a boy, she's got short hair, people would often think she was a boy (I7:34)

(He was) a bit, if you like, soft, the expression soft for a child means, especially a boy means, someone who sort of was willing to use an excuse to sort of stay at home with mum, and this did happen quite a bit... he would sometimes have a little cry (I8:28)

Assertive behaviour

Teachers in this study reported many instances in which boys took a leadership role, were assertive and dominated situations. Girls were reported as assertive in far fewer cases and in one of these the instances the teacher reported that the girl did not demonstrate the assertive behaviour at school but the teacher relied on her parents reports of the girls assertiveness at home. Where girls did display leadership qualities at school these were reported as being tempered by a willingness to fit in with the class 'academically'.

The boys could be more authoritative and more dogmatic and overpowering than a girl and if they're not someone who's assertive and per-

haps confident... they could be squashed easily (I4:69)

Rachel and Linda are the kind of girls who always want to be at the front, always wanted to be first, always wanted you know, to be in charge of whatever was going on but academically they were happy to share things...and if they were instructed to do things...they were happy to do that (I16:34)

Who me? Boys and the art of being noticed

Several utterances refer specifically to behaviours in which teachers describe boys as noticeable. Being noticeable is a theme used exclusively by teachers when they are speaking about boys. Illustrative examples of this are:

Some of the easiest ones to remember are several boys who've been very good at maths (I2:41)

Well the boys come to mind, now see, that's not very fair is it?, because there were probably girls (I2:43)

A really talented boy is noticeable, don't know why shouldn't that be for girls. No, got no answer for that at all (I8:108)

Girls' ability to be noticed is barely referred to by teachers in this study. No teacher specifically stated that gifted girls are noticeable in the way they did about boys. Some teachers see identifying gifted girls as difficult and in one case, gender exclusive.

For a girl to be noticed I think they need a female teacher to pick that out a little easier than me, and for a female to be noticed as gifted, I think they would probably, well they'd need to be different...they've got to do something for you to recognise (I8:115)

Unless you were aware of it, you wouldn't even look for it. You'd say, she's just a very quiet kid, doesn't cause any trouble...I think you'd have to go out of your way (to identify a gifted girl) (I13:122)

During interview thirteen the teacher claimed he had never encountered a gifted girl in his ten year career. He did say, however, that when he was teaching year seven "the top twenty students in that group were girls" (I13:115), when the researcher replied "but none of them were gifted?", the teacher responded:

Could have been, could have been. But if they were, they were too polite to say anything (laughs) if you, if I'd be so bold as to say that. They were very happy to be where they were, they enjoyed being in the class, they enjoyed doing the work we were doing, the way we did it (I13:116)

What do the teachers' conceptions of giftedness mean for girls?: Implications of the study.

These findings indicate that teachers do in fact hold implicit views of gifted and talented boys and girls that differ in significant ways. Teachers in this study see girls according to the feminine stereotype, that is, girls are seen as more compliant, helpful and predisposed to nurturant, people oriented pursuits. Girls who do not conform to the feminine stereotype are considered atypical or as tomboys. Because gifted girls apparently mask their giftedness in their efforts to fit in to their environment and their peers (Bell, 1989; Callahan, Cunningham, & Plucker, 1994; Reis, 1990; Smutny, 1998) they do not make their giftedness as apparent to their teachers as their male counterparts. Boys, who are seen by these teachers according to the masculine stereotype, make their high ability known to the teacher through claiming to be bored or by emphasising their special accomplishments. They are more adept at gaining teacher attention and recognition through their behaviours.

These findings mean that gifted girls are subject to teacher expectations that fulfil and confirm the teachers' gendered perceptions of ability, masculinity and femininity. These teacher expectations seriously disadvantage high ability girls who, through socialisation processes have learned to mask their ability to conform to stereotypic feminine standards. In other words, the teacher in interview ten was accurate in her statement that gifted girls "have got their work cut out for them" (I10:79) to be identified and provided for as high ability students.

It is evident from the findings of this research that teacher professional development must address the issue of the masculinisation of giftedness. Gender equity in the identification of and provision for gifted students must be a priority. The stereotypic image of the mad professor as the typical gifted person, appears to be held quite firmly in the minds of some teachers. There are clear implications for children who do not fit this image yet have special needs as high ability students. Gifted girls are at significant risk of underachievement through simply going unnoticed by their teachers.

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Biographical note

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