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Expressivity in children's drawings of themselves for adult audiences with varied authority and familiarity

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This study investigated whether children's expressive drawings of themselves vary as a function of audience authority and familiarity. One hundred and seventy-five children, 85 boys and 90 girls, aged between 8 years 1 months and 9 years 2 months (M = 8 years 5 months) were allocated into seven groups: a reference group (n = 25), where no audience was specified, and six audience groups (n = 25 per group) varying by audience type (policeman vs. teacher vs. man) and familiarity (familiar vs. unfamiliar). They drew baseline then happy and sad drawings of themselves, rated affect towards drawings type, and rated perceived audience authority. Audience familiarity and authority impacted expressive drawing strategy use and this varied by gender. There was higher overall expressive strategy use for happy drawings and for girls, and influences of affect type, familiarity, and authority were found. The implications of children's perceptions of audience type on their expressive drawings are discussed.

Statement of contribution

What is already known on this subject?

- Children vary their happy and sad expressive drawings for familiar peer and adult audiences.
- They show more positive expressivity to familiar peer and adult audiences.
- Children perceive authority differently depending on professional roles.

What does this study add?

- Children's expressive drawings differ depending on audience familiarity and professional role.
- Greater expressivity for familiar than unfamiliar audiences, with difference varying by perceived authority.
- For policemen, boys showed more sad expression when unfamiliar and girls showed more happy expression when familiar.

Children alter drawn emotional information depending upon characteristics of the audiences they think will need to determine the emotional content of their drawings. The present study investigated whether children's expressive drawings of themselves vary as a function of audience authority and familiarity.

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It is important to understand children's drawings for different audiences as they are used in clinical, forensic, educational, and therapeutic contexts for information about how children feel (Bekhit, Thomas, & Jolley, 2005). Drawings can supplement interviews regarding children's thoughts and feelings about people and events (Barlow, Jolley, & Hallam, 2011; Bekhit *et al.*, 2005; Burkitt, 2016; Hammer, 1997; Hunsley, Lee, & Wood, 2003; Macleod, Gross, & Hayne, 2014; Malchiodi, 1998; Patterson & Hayne, 2011). It is conceivable that children alter their drawings for specific professionals in different ways (Burkitt & Watling, 2013; Macleod *et al.*, 2014; Woolford, Patterson, Macleod, Hobbs, & Hayne, 2015). From the perspective of a framework theory of art, children's understanding of art develops through understanding the intentional links between the artefact, the drawer, and the world (Freeman, 1995). The links between the artist and the viewer (audience) are under researched.

Presently, 8- to 9-year-olds were chosen as they understand authority status and roles, including social conventional authority to make and alter rules (Dodsworth-Rugani, 1982; Laupa, 1991). They understand that authority varies by context (Laupa & Turiel, 1993; Low & Durkin, 1997) with a growing appreciation of social roles and institutions (Laupa, 1991). Children in this age range can be strategic in how they present themselves depending on audience information (Banerjee, 2002), aiming to create positive impressions (Tyler & Feldman, 2005).

Children know drawings can communicate to a viewer from as early as 3 years (Callaghan, 1999) and can alter their usual graphic routines to depict positional and affective emotion across early to mid-childhood to show objects from different viewpoints and emotional characteristics of topics (Burkitt, Barrett & Davis, 2004; Callaghan, 1999; Sitton & Light, 1992). When instructed a viewer needs to know the feelings of a drawn person, 5- to 6-year-olds alter how they depict positive and negative affect (Burkitt, Watling, & Murray, 2011), using drawing strategies differently to communicate affective information (Burkitt, 2016; Picard, Brechet, & Baldy, 2007; Picard & Gauthier, 2012). Further, when 6- to 8-year-olds are explicitly instructed that either a child or an adult will need to understand positive or negative feelings of the drawn person, they alter the properties of a drawing depending on the audience. For example, positive behaviours (e.g., gift giving) are represented more within drawings for adult audiences, whilst negative behaviours (e.g., thumping) are represented more for child audiences (Burkitt, 2016; Burkitt & Watling, 2013).

We manipulated audiences' professional authority and familiarity. Adults' professional status influences children's behaviour. For instance, in forensic, educational, or clinical interview settings (Hammer, 1997; Shiakou, 2012), children may feel intimidated when drawing for a particular audience and offer less information than they might to another adult. Alternatively, children may divulge more information to a professional audience due to a compliance effect, which can be very influential in children's communication with adults (Lewis, Kellet, Robinson, Fraser, & Ding, 2004). Further, children's familiarity with members of professional audiences may impact the amount and type of information children share. In the drawing domain, children depict more positive expressivity for familiar audiences and more negative expressivity for unfamiliar audiences (Burkitt & Watling, 2013; Burkitt *et al.*, 2011). Whilst we know audience impacts children's positive and negative drawn expressivity, it is important to examine how audience characteristics may interact to influence the amount and types of emotional information children represent about themselves in their drawings.

We have chosen two types of authority figures (policemen and male teacher); both are professional groups that children may encounter and that tend to represent authority

figures which children comply differently to and perceive to have contrasting authoritarian legitimacy. Powell, Skouteris, and Murfett (2008) found that when children heard a scenario about a police officer, teacher, or an unspecified adult requiring help, that compliance to and the perceived legitimacy of these groups were highest for the police officer, then teacher, then the unspecified adult.

The projective approach examines features in children's drawings for emotional meaning (Koppitz, 1968, 1969), such as small figure size representing fear; this has been found to be unreliable as indicators of emotion leading for calls of extreme caution when projecting meaning into children's drawings (Burkitt, 2016; Crawford, Gross, Patterson, & Hayne, 2012; Lilienfeld, Wood, & Garb, 2000; Strange, Hoynck Van Papendrecht, Crawford, Candel, & Hayne, 2010; Woolford *et al.*, 2015). The present study follows an approach which investigates how children alter drawing strategies when provided with contrasting emotional characterizations of topics (Burkitt, 2016; Jolley, Fenn, & Jones, 2004; Picard & Gauthier, 2012; Picard *et al.*, 2007). We also included a measure to check that children differentially perceived the happy or sad characteristic of the target topic.

Expressivity here is defined as the use of single and combined strategies to convey mood. Research has identified three core types of expressive drawing strategies that children use singly or in combination to convey affective information (Burkitt, 2016; Jolley *et al.*, 2004; Picard & Gauthier, 2012). Literal strategies are regarded as observable emotion signifiers, such as smiling to convey happiness or crying to depict sadness. Non-literal strategies are those where content is altered to convey mood, such as a drooping flower. Abstract strategies are non-literal signifiers, such as line pressure variations. Such expressivity develops between 5 and 11 years, with younger children using single more literal strategies and with age more complex and combined strategies to convey affective characteristics (Burkitt & Watling, 2015; Jolley *et al.*, 2004; Parsons, 1987; Picard & Gauthier, 2012; Picard & Lebaz, 2010; Winston, Kenyon, Stewardson, & Lepine, 1995).

Using established procedures (Burkitt & Watling, 2013; Burkitt *et al.*, 2011), children were asked to draw themselves in contrasting affective states for a specified audience, or for no audience (reference group). We expected that children would draw more expressive drawings across the audience groups than in the reference group. As children verbally express more information to authority than non-authority figures (Lewis *et al.*, 2004), we anticipated greater expressivity for professional authority audiences than for an unspecified man. We also aimed to explore whether expressivity differed depending on positive and negative affect by audience type. Given that children show more expressivity, particularly in happy drawings, to unspecified familiar than unfamiliar peer and adult audiences (Burkitt & Watling, 2013), we expected expressivity would be higher, and more positive, for familiar than unfamiliar audiences, and that this may vary by profession. Lastly, girls tend to produce more expressive drawings using more literal strategies than boys (Picard & Boulhais, 2011; Picard *et al.*, 2007). Therefore, we predicted that overall expressivity and the use of literal expressive strategies would be higher for girls than for boys. We explored whether this would vary by audience type.

Method

The study was approved by the University Research Ethics Committee. Participants were 175 children, between 8 years 1 month and 9 years 2 months (M = 8 years 5 months; SD = 4 months; 85 boys and 90 girls). After project approval from the University Research

Ethics Committee, eight schools were approached. Head teachers were asked whether children had met a policeman though class activity relating to educational programmes. Five schools affirmed this was the case and participants were then sampled from these East and West Sussex, UK, schools based on age. The mainstream schools were two with low and three with middle reported SES. Children were randomly allocated by gender into seven audience groups: a reference group (n = 25), where no audience was specified, and six experimental audience groups (n = 25) that varied by professional type (policeman vs. teacher vs. man) and familiarity (familiar vs. unfamiliar).

Materials

Coloured lead pencils and A4 white paper (presented in portrait orientation) were provided for the children to complete their drawings.

Procedure

All children were seen individually within a quiet area of the school by one of two trained female researchers for approximately 20–30 min, within sight of their class teacher. Each researcher carried out the research process with approximately half of the children within each condition.

Drawing tasks

All children drew the baseline figure first followed in counterbalanced order by a happy and sad figure. Children's affect towards the drawings was measured immediately after completion of each drawing using a 5-point sad-smiley face Likert scale (1 = very sad, 2 = sad, 3 = neither happy nor sad, 4 = happy, 5 = very happy). The instructions for the reference audience group are presented in full below with reference to audience group variations in task instructions.

Reference audience group. Children in the reference audience group were instructed to draw the three differently characterized self-figures without any reference to a communicative purpose or an intended audience.

> *Baseline task:* 'I'd like you to think of a time when you were not really happy or not really sad. I'd like you to draw yourself remembering that you were not really happy or not really sad'.
> *Happy drawing task:* 'Now, think of a time when you were very happy. I'd like you draw yourself remembering how very happy you were'.
> *Sad drawing task:* 'Now, think of a time when you were very sad. I'd like you draw yourself just remembering how sad you were'.

Audience groups.

> *Baseline task:* 'I'd like you to think of a time when you were not really happy or not really sad. I'd like you to draw yourself remembering that you were not really happy or not really sad. I would like you to imagine that [insert condition appropriate audience] a man who you know/a man who you do not know/a teacher who you know/a teacher you do not know/a

> policeman you know/a policeman who you do not know will see your picture and will need to tell how you are feeling'.
> *Happy drawing task:* 'Now, think of a time when you were very happy. I'd like you draw yourself remembering how very happy you were. I would like you to imagine that [insert condition appropriate audience] a man who you know/a man who you do not know/a teacher who you know/a teacher you do not know/a policeman you know/a policeman who you do not know will see your picture and will need to tell how you are feeling'.
> *Sad drawing task:* 'Now, think of a time when you were very sad. I'd like you draw yourself using just remembering how sad you were. I would like you to imagine that [insert condition appropriate audience] a man who you know/a man who you do not know/a teacher who you know/a teacher you do not know/a policeman you know/a policeman who you do not know will see your picture and will need to tell how you are feeling'.

Affect rating

To check the effectiveness of the manipulation of emotion type that was given in the task instructions, immediately after completion of each drawing children were asked: *'I would like you to point to the face that shows how you feel about the figure. Here are the faces that you are going to be looking at (pointing to each in turn). The first one is a very sad face, the next one is sad, the next one is a bit sad, the middle one is just OK, the fourth one is a bit happy, the next one is happy and the last one is a very happy face. Which one do you feel about the figure most at the moment?'.*

Authority rating

We then assessed children's perceptions of audience authority to check the effectiveness of the manipulation of audience type provided in the task instructions, children were asked:

> How much power does the policeman/male teacher/man [intended audience inserted depending on condition] have to make rules for other people?

Children responded using a 5-point Likert scale: 1 (none), 2 (a little bit), 3 (quite a bit), 4 (quite a lot), and 5 (very much).

Relative drawing ability

To assess whether children's drawing ability was as comparable across conditions, teachers were asked to rate each child's drawing ability relative to their year group using the scale 1 (below average), 2 (average), 3 (above average).

Coding

Overall strategy use and expressivity were assessed using the same coding and scoring procedures applied in previous research to ensure consistency of coding and comparability of current and previous findings (Burkitt, 2016; Picard *et al.*, 2007).

Depictions of happiness and sadness

Two independent raters, one male and one female, naïve to the children's age, gender, drawing instructions, and audience condition, coded each drawing as to whether the drawing was baseline, or an appropriate depiction of happy or sad emotion. The raters were provided with drawings in random order and with participants' own drawings separated (so not coded by participant), allowing them to code each drawing individually rather than relatively. Inter-rater reliability of the allocation of drawings overall (K = .90) and by emotion type was high (K = .91, K = .92, K = .93 for baseline, happy, and sad drawings, respectively). Disagreements were resolved through discussion.

Drawing strategies

For each child's drawings, happy and sad drawings were analysed for the types of drawing strategies used to depict mood overall relative to the baseline drawings. The drawings were coded by two different independent coders (both female) who were blind to the condition that the child was taking part in for the use of a literal (L) strategy, a non-literal content strategy (NLC), a non-literal abstract strategy (NLA), or a combination of all three types of strategy. Table 1 presents descriptions of the types of graphic cues included for each graphic cue drawing strategy. A drawing was deemed to include a strategy relative to baseline when there was at least one emotion appropriate graphic cue for the strategy. Inter-rater reliability was high (K = .92). Coding differences were resolved through discussion with all expressive drawings subsequently included in the analyses.

Happy, sad, and overall expressivity scores

Happy and sad drawings were assigned an overall expressivity score based on the use of the above graphic strategies. Scores range from 1 to 6, with higher scores indicating use of more complex strategies. The simplest strategy was where mood is expressed directly in literal elements (L), such as facial expressions. A more complex strategy was when figurative cues were included in an indirect manner (NLC). The most complex strategy was when mood is depicted in a purely abstract way (NLA).

Table 1. Changes from baseline drawings in types of graphic cue by Literal (L), Non-Literal Content (NLC), and Non-Literal Abstract (NLA) strategies

	Strategy type	
L	NLC	NLA
Smiles or frowns	Actions	Line quality (neat, messy, dark or light)
Posture	Finger waving	
Eyebrows	Weather	Colour change
Tears	Objects (e.g., gun, ruler)	Figurative abstract (e.g., morphed shapes)
	Clothing (uniform, tie)	
	Shouting	
	Other humans	
	Characterizations (e.g., super hero, cadet, pupil, footballer)	

The strategies were scored using Picard *et al.*'s (2007) scheme as follows: L = 1, NLC = 2, NLA = 3, L & NLC (1 + 2 = 3), L & NLA (1 + 3 = 4), NLC & NLA (2 + 3 = 5), and L & NLC & NLA (1 + 2 + 3 = 6). A score of 3 could equally reflect the singular application of strategy NLA or the combined use of strategies L and NLC; the ambiguity of this score did not feature in the analysis as the single use of NLA did not occur.

Results

Teacher ratings of drawing ability

Teachers' ratings of children's drawing ability relative to year group were analysed to check that drawing ability was not a confounder for subsequent analyses using a 7 (audience group: reference group, and each audience by familiarity group) × 2 (gender: boy, girl) independent ANOVA. No significant main or interaction effects were found indicating a comparability of abilities across audience groups.

Ratings of audience authority

To assess whether audience types were perceived as having different levels of authority, we conducted a 7 (audience group) × 2 (gender) independent ANOVA. There was a main effect of audience group, $F(6, 175) = 31.02$, $p < .001$, $\eta_p^2 = .84$. *Post hoc* comparisons with Bonferroni corrections (all reported results have *ps* < .001) showed that, as expected, children in all audience groups rated authority higher than children in the reference audience group ($M = 1.39$, $SE = .09$, $p = .010$) and authority was rated higher in the familiar policeman audience group ($M = 4.60$, $SE = .09$) than all other audience types. Children in the unfamiliar policeman ($M = 3.84$, $SE = .09$) and familiar teacher ($M = 4.04$, $SE = .09$) groups rated authority higher than the unfamiliar teacher ($M = 2.84$, $SE = .09$) and unfamiliar man ($M = 2.20$, $SE = .09$) audience groups. Children in the familiar teacher group rated authority greater than those in the familiar man group ($M = 3.08$, $SE = .09$, $p < .001$). No other significant main or interaction effects were found.

Affect towards drawing types

To assess whether children rated affect towards drawn figures were in the anticipated direction, we conducted a 7 (audience group) × 2 (gender) × 3 (drawing type) mixed ANOVA with drawing type (baseline, happy, sad) entered as a repeated measure and the other variables entered as between-subject measures. Sphericity of drawing type was significant, $W = .92$, $X^2(2) = 12.69$, $p = .002$, we therefore report findings with Greenhouse–Geisser correction. A main effect of drawing type was found, $F(1.86, 299.18) = 1{,}083.96$, $p < .001$, $\eta_p^2 = .87$. *Post hoc* pairwise comparisons with Bonferroni corrections showed (all *ps* < .001), as anticipated, that children rated the figure in the happy drawings ($M = 3.75$, $SE = .05$) higher than in both the baseline ($M = 2.70$, $SE = .05$) and the sad drawings ($M = 1.05$, $SE = .02$). Whilst drawing type interacted with audience group and gender, $F(11.15, 299.18) = 4.96$, $p < .001$, $\eta_p^2 = .16$, these effects were driven by differences in ratings between audience groups within a drawing type, rather than between drawing types within audience groups, which were not of interest for our analyses so were not followed up.

Expressivity by audience group, mood, and gender

The data met specific assumptions (e.g., the degrees of freedom and error term >40) to permit applying parametric testing with binary data (Burkitt, 2016; Greer & Dunlap, 1997; Lunney, 1970; Picard *et al.*, 2007). The overall expressivity score was analysed using a 7 (audience group) × 2 (gender) × 2 (mood) mixed ANOVA with audience group and gender entered as between-subject factors and mood (happy, sad) entered as a within-subject factor. Main effects were followed up with *post hoc* comparisons with Bonferroni corrections. The means and standard deviations of expressivity by audience group, gender, and mood are shown in Table 2.

A main effect of mood was found $F(1, 161) = 4.12$, $p = .044$, $\eta_p^2 = .025$, with higher expressivity in the happy ($M = 2.18$, $SE = .05$) than sad ($M = 2.05$, $SE = .05$) drawings. There was a main effect of audience group, $F(6, 131) = 3.68$, $p = .002$, $\eta_p^2 = .12$, whereby there was greater expressivity for children drawing a familiar man ($M = 2.30$, $SE = .10$) than a familiar teacher ($M = 2.19$, $SE = .10$, $p = .041$), and there was higher expressivity for children drawing both the familiar man ($p = .001$) and familiar policeman ($M = 2.39$, $SE = .10$, $p < .001$) than the unfamiliar teacher ($M = 1.84$, $SE = .10$).

Table 2. Mean (*SD*) expressivity scores (maximum 6) by audience group, mood, and gender

Audience group	Happy *M* (*SD*)	Sad *M* (*SD*)
Reference		
Boys	1.92 (0.79)	1.75 (0.75)
Girls	2.15 (0.38)	2.23 (0.44)
Total	2.04 (0.61)	2.00 (0.65)
Familiar man		
Boys	2.31 (0.48)	2.30 (0.48)
Girls	2.58 (0.67)	2.00 (0.74)
Total	2.44 (0.58)	2.16 (0.62)
Unfamiliar man		
Boys	1.75 (0.45)	2.08 (0.51)
Girls	2.31 (0.48)	1.85 (0.55)
Total	2.04 (0.54)	1.96 (0.54)
Familiar teacher		
Boys	2.09 (0.30)	1.82 (0.40)
Girls	2.57 (0.51)	2.29 (0.47)
Total	2.36 (0.49)	2.08 (0.49)
Unfamiliar teacher		
Boys	1.92 (0.51)	1.67 (0.49)
Girls	1.92 (0.86)	1.85 (0.55)
Total	1.92 (0.70)	1.76 (0.52)
Familiar policeman		
Boys	2.33 (0.49)	2.00 (0.74)
Girls	2.85 (1.28)	2.38 (0.77)
Total	2.60 (1.00)	2.20 (0.76)
Unfamiliar policeman		
Boys	1.77 (0.60)	2.61 (0.96)
Girls	2.00 (0.74)	1.83 (0.83)
Total	1.88 (0.67)	2.24 (0.97)

A main effect of gender was found $F(1, 161) = 5.51$, $p = .020$, $\eta_p^2 = .03$, with girls ($M = 2.20$, $SE = .05$) drawing more expressive drawings overall than boys ($M = 2.02$, $SE = .05$). An interaction between mood and gender was found $F(1, 161) = 5.68$, $p = .018$, $\eta_p^2 = .03$, which was qualified by a three-way interaction between mood, audience type, and gender, $F(6, 161) = 2.17$, $p = .048$, $\eta_p^2 = .08$ (see Table 2). Girls in the familiar man ($p = .011$), unfamiliar man ($p = .049$), and familiar policemen ($p = .049$) audience groups drew significantly more expressive happy than sad drawings, while there was no difference in boys' drawings ($ps > .150$). Boys in the unfamiliar policeman audience group drew significantly more expressive sad than happy drawings ($p < .001$), while there was no difference in girls' drawings ($p = .491$).

Expressivity by strategy

We assessed literal expressive strategy use only, due to insufficient use of the other strategies to allow analyses (see Table 3 for percentage use of the strategies). A 7 (audience type) × 2 (gender) × 2 (mood) mixed ANOVA, with audience type and gender as between-subject factors and mood (happy, sad) entered as a within-subject factor, was conducted. There was a main effect of gender $F(1, 161) = 4.18$, $p = .042$, $\eta_p^2 = .02$, whereby girls ($M = 0.43$, $SE = .04$) used the literal strategy significantly more than boys ($M = 0.33$, $SE = .04$). No further main or interaction effects were found.

Discussion

This study examined expressivity in children's drawings of themselves depending on audience authority and familiarity. In line with expectations, the specification of an audience resulted in higher expressivity than when no specific audience characteristics were given in the reference group (Burkitt, 2016; Burkitt & Watling, 2013; Burkitt *et al.*, 2011). This supports the cue dependency model of drawing (Freeman, 1995), showing that variations in task instructions impact the form of resultant drawings (Burkitt, 2016; Callaghan, 1999; Sitton & Light, 1992). In support the framework theory of art (Freeman, 1995), children altered their drawings of expressive drawings in the light of characteristics of an intended audience.

As anticipated, more expressivity was shown to familiar than unfamiliar audiences (Burkitt & Watling, 2013). This supports research from the verbal domain that children respond to familiar adults with more communication, about both positive and negative information, than to unfamiliar audiences (Lewis *et al.*, 2004), and that the familiarity of an intended audience encourages more expressivity in the drawing domain (Burkitt & Watling, 2013). These findings may also reflect a tendency for children to present themselves more favourably to friends, namely a familiar audience (Tice, Butler, Muraven, & Stillwell, 1995).

Importantly, we found that overall expressivity was not just dependent on familiarity, but that there was an interaction with the type of professional authority. We found that children showed more expressivity in drawings for the familiar man and familiar policemen than for the unfamiliar teacher, and more expressivity was shown in drawings for the familiar man than for the familiar teacher. These findings may relate to a differential perception of the roles and scope of authority of the professional groups (Powell *et al.*, 2008). It may also relate to an awareness of different interpersonal consequences (Zeman & Garber, 1996) of containing enough information for a familiar policeman and man rather

Table 3. Percentage use of each expressive strategy for happy and sad drawings (mood) relative to baseline and overall by audience group and gender

Audience group	Reference				Familiar man				Unfamiliar man				Familiar teacher				Unfamiliar teacher				Familiar policeman				Unfamiliar policeman				Mean overall use
Mood	H		S		H		S		H		S		H		S		H		S		H		S		H		S		
Gender	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	
L	37	44	34	47	50	60	48	39	31	42	45	37	46	60	33	50	33	37	36	39	43	57	36	52	35	31	56	53	43
NLC	2	3	1	5	2	5	1	2	–	2	3	1	2	6	1	2	2	2	–	–	2	9	–	2	–	5	1	–	2
NLA	–		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L-NLC	7	8	6	7	7	14	12	7	9	7	7	6	6	12	6	7	8	10	6	6	10	15	8	5	8	10	4	1	8
L-NLA	–	–	–	1	2	1	1	–	–	–	–	–	–	1	–	2	–	–	–	–	2	2	–	2	–	–	1	–	0.54
NLC-NLA	1	2	2	4	3	7	4	–	2	1	1	2	4	7	5	3	1	1	2	–	3	7	1	–	–	4	–	5	2.53
L-NLC-NLA	–	1	–	–	1	2	7	1	1	–	–	–	1	6	–	2	1	–	–	1	3	5	2	4	4	–	–	1	1.54
Mean overall use	47	58	43	64	65	88	73	49	43	52	56	45	59	92	45	66	45	50	44	46	63	95	47	65	47	50	62	60	

Note. L = literal; L & NLA = literal and non-literal abstract; L & NLC = literal and non-literal content; L & NLC & NLA = literal, non-literal content, and non-literal abstract; NLA = non-literal abstract; NLC = non-literal content; NLC & NLA = non-literal content and non-literal abstract.

than an unknown teacher to understand. In fact, we found through the ratings of audience authority that children judged familiar policemen as having higher authority than unfamiliar teachers and although not significant, children did rate familiar men as having more authority than unfamiliar teachers.

It is also conceivable that children could think of more negative consequences of not disclosing enough information to a policeman or to a known man than to a teacher, whether they were familiar with the teacher or not. There may be an influence of social learning in that children may see people, particularly in media channels, divulging emotional information to known men and policemen more than they would have opportunity to witness emotional disclosure to an unfamiliar teacher.

We extended the examination of expressivity in this vein of research by exploring expressivity for happy and sad drawings along with impacts of audience type and participant gender. Children produced more expressive happy than sad drawings. We know that in the verbal domain children expect individuals will present more positive information about the self than negative information, in particular to familiar others (Hicks, Liu, & Heyman, 2015); and, in the drawing domain, children draw more positive than negative drawings for adult audiences (Burkitt & Watling, 2013; Burkitt *et al.*, 2011). It could be reasonable to suggest that they may be encouraged to show more happy than sad emotions in line with social display norms (Zeman & Garber, 1996) and may be more experienced in producing happy than sad drawings for people such as family and friends.

As anticipated, girls produced more expressive drawings than boys. They used more literal strategies (possibly the clearest way to depict emotion when an audience needs to know what emotion is being depicted). The predominant use of literal strategies to depict mood is common for children in this age range (Picard & Boulhais, 2011; Picard *et al.*, 2007). Gender differences may arise as girls tend to recognize nonverbal emotion cues more effectively than boys (Hall & Bernieri, 2001; McClure, 2000) and therefore may reproduce recognized cues. Alternatively, girls may show greater expressivity than boys due to their more affiliative nature and potential influences of socialization. They tend to communicate more affiliative expression than boys in conversation (Leaper & Smith, 2004), and this may extend to their drawings.

Surprisingly, we found that the pattern of expressivity for happy and sad drawings varied between boys and girls in their drawings for the familiar and unfamiliar policemen. Whilst girls showed significantly more expressivity in their happy than sad drawings than boys in the familiar policeman group, boys showed more expressivity in their sad than happy drawing than the girls in the unfamiliar policeman group. The finding for girls is consistent with the main effect of showing greater expressivity in the happy than sad drawings. However, the finding for boys is opposite to the main expectations. Although gender differences were not detected by the check of perceived authority in the current study, girls tend to regard police and the justice system more positively than boys and be less resistant to requests than boys (Chaundhary, Hviid, Marsico, & Villadsen, 2017). It may be that the boys' drawings in the unfamiliar policeman group may reflect an awareness of professional authority in that handling and addressing negative information is a core professional function of policeman. It is also conceivable that boys found it easier to use more negative cues within their drawings to depict sadness when the audience was an unfamiliar professional in an authority position, possibly due to a perception of fewer negative interpersonal consequences of divulging personal negative information to an unfamiliar than to a known adult. The converse, however, could equally be argued in that the perception of negative consequences could be higher if revealing information about oneself to an unknown rather than known person. This explanatory validity of these ideas

warrants further study. This work adds to our growing understanding of children's use of audience cues in deciding about information disclosure, suggesting that when looking at opportunities for disclosure that it would be important to look not only at audience age (peer or adult) and familiarity, but also the perceived authority.

There were some features of the present study that curtail the scope of the conclusions. First, the degree of familiarity with reference to children's individual experience with the audience could be measured in future work to assess influences of the extent of familiarity on their drawings. The familiarity ratings did, however, attest to the effectiveness of the task instructions in creating children's views of the familiarity or unfamiliarity of the intended audience. Second, whilst a measure of children's views of audience authority was taken, other measures of perceived authority, such as the context or legitimacy to make rules or the degree children would comply to a request from members of the profession, may yield different gauges of the perceived the authority of the audiences. Using specific examples of individuals in different professions, they have met regularly or having a range of professionals present in the drawing context may exaggerate any effects of the profession and familiarity of the intended audience on children's drawn expressivity. It would also be beneficial to examine the role of children's perceived risk of disclosing affective information to certain audiences to understand who they might give different types of information to. As children's self-presentational behaviour (Banerjee, 2000, 2002; Watling & Banerjee, 2012) and use of expressive strategies develops with age (Picard & Gauthier, 2012; Picard *et al.*, 2007), a larger age range could be sampled in future research. Children could be interviewed about why they represent themselves in certain ways for different types of information to different audiences.

Importantly, a broader range of professional and personal audiences, such as doctors and parents, along with examination of a broader range of single and even mixed emotions, could be included in future research. The audiences in the present study were specified as male. The audience characteristics in future research could be extended to examine how children would draw for female audiences and for same or opposite sex audiences, as we know that by middle childhood children interact in gendered ways in response to some else gender (Leman, Skipper, Watling, & Rutland, 2016). For example, girls of this age will adopt a more circumspect than assertive mode of communication to voice their view to boys (Leman, Ahmed, & Ozarow, 2005), and variations of such behaviour may become evident in expressive drawings between genders.

There is a clear need to caution interpretation of children's drawings without reference to the meaning of the drawings to the individual children (Lilienfeld *et al.*, 2000; Woolford *et al.*, 2015). Crucially, future research in this vein could include interviews (Angell, Alexander, & Hunt, 2014) to understand what children mean to express to different audiences and which strategies they view as expressive.

The findings have implications for drawing use in professional settings. Whilst there is limited evidence for interpreting children's drawings alone for emotional information, drawings can serve as a basis to supplement and improve verbal communication (Woolford *et al.*, 2015). Being aware that children may draw emotions differently for different professional groups may help practitioners to understand children's feelings towards the drawn topics more fully and afford a basis of discussion to ask children why they drew certain information for certain people. The findings indicate that it matters which profession children think they are drawing themselves for and whether they are familiar with a member of that profession.

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