IUL School of Social Sciences

Department of Social and Organizational Psychology

Development of Ambivalent Sexism in Childhood: Effect on Future Career Aspirations

Stefanie Richters

Dissertation submitted as partial requirement for the conferral of

Erasmus Mundus European Master in the Psychology of Global Mobility, Inclusion and Diversity in Society

Supervisor:
Ricardo Borges Rodrigues, PhD, Invited Assistant Professor
ISCTE – University Institute of Lisbon

Co-supervisor:
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Abstract

Ambivalent Sexism Theory draws attention to the ambivalence of sexist beliefs and their key role in the maintenance of gender inequality. Two studies were conducted in order to investigate the development of hostile and benevolent sexism in childhood. A systematic literature review was carried out, reanalyzing literature of the past 9 years of research on gender knowledge in childhood through the framework of Ambivalent Sexism Theory. The findings show that most of the measures applied tap into the dimension of hostile sexism. Those tapping into the benevolent dimensions suggest that children from a young age hold strong beliefs about the complementarity of stereotypes and heterosexual partnership. Second, the Childhood Ambivalent Sexism Measure was developed as a new measure of ambivalent sexism in childhood and applied in a sample of 7-10-year-old Portuguese children. The factor structure obtained allows to distinguish between hostile sexism and two factors of benevolent sexism: protective paternalism and heterosexual intimacy. Results show that children from the age of 7 show high levels of stereotype knowledge and personal endorsement of benevolent sexism. Endorsement of hostile sexism compared to the benevolent sexism is lower, and more so for girls, while for benevolent sexism no gender differences were found. Moreover, the effect of ambivalent sexism on children's future career aspirations was tested. Girls who show higher stereotype knowledge of protective paternalism also show more interest in professions that require higher levels of warmth as compared to competence. The results are discussed with regard to theoretical implications and recommendations for intervention.

Keywords: ambivalent sexism; childhood; gender stereotypes; professional aspirations

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Introduction

In the past century, women have gained a lot of legal rights, however, gender inequalities prevail in most countries (Eagly, Wood & Diekman, 2000). Although the status relations between men and women can vary between societies, they typically favor men. The position of women within social hierarchy is connected with the possession of fewer resources and greater external control of their behavior, especially in the context of marriage and sexuality (Eagly et al., 2000). A report on equality between men and women in the European Union, presented by the European Commission (2019), showed that, despite remarkable progress, the gender pay gap within European countries remains about 16%, 10% of which may not be explained through structural factors such as education, occupation, working hours, firm size or industry. Although women reach on average higher levels of education, they remain over-represented in low-paid industries. Statistics on gender-based violence show that one out of three women in Europe from the age of 15 has experienced physical or sexual violence (European Commission, 2019).

Gender is not only among the first social categories that children acquire, but also the most dominant category in adulthood (Zemore, Fiske, & Kim, 2000; Rudman & Glick, 2010). Thus, it is crucial to understand the new generations' social representations about these categories, in order to draw implications on social change. The aim of this master thesis is to analyze the development of gender knowledge and personal beliefs through the lens of Ambivalent Sexism Theory (AST; Glick & Fiske, 1996). Previous research has shown that children acquire gender stereotypes from the age of 2 years (Ruble, Martin, & Berenbaum, 2006). AST considers that not only negative, but also ostensibly positive stereotypes about women play an important role in maintaining gender status relations. The results of the present research hold the potential to bring new insights for educational or interventional purposes and to draw conclusions on theoretical implications.

This work is divided into three chapters. In the first chapter, the topic will be embedded in a broader theoretical context and previous empirical findings will be analyzed. The second chapter comprises a systematic literature review, in which literature of the past 9 years of research on gender development is reanalyzed through the framework of AST. The third chapter covers the main study, for which a new measure of ambivalent sexism in childhood has been developed and applied in a sample of 7-10-year-old Portuguese children. Finally, the main conclusions are summarized.

Chapter I – Theoretical Framework

The theoretical base of this project is Social Role Theory (SRT; Eagly, 1987) which proposes to explain behavioral differences between men and women. According to the theory, these differences derive from the contrasting social roles of men and women that require specific skills for successful performance. Thus, central to the differential roles and behavior is the division of labor between men and women. Psychological and social processes mediate the impact of the social role on the behavior of the individual (Eagly et al., 2000). SRT is a social-structural approach: gender is seen as a social construction which is a predictable consequence of the way societies are organized (Rudman & Glick, 2010; see Wood & Eagly, 2012 for an overview on empirical findings).

The social roles that men and women hold are connected with differences in status and power (Eagly et al., 2000). Although women are disadvantaged in relation to men in many ways, this relationship is often seen as legitimate by both men and women (Jost, Banaji, & Nosek, 2004). Eagly (1987) argues that gender roles encourage people to show behavior and develop traits that confirm the role through compliance to role-based expectations and that stereotypes function in a way that the distribution of these social roles is perceived as justified. More specifically, women are ascribed traits of communality that are associated with the domestic role and men are ascribed traits of competence that are associated with higher-status roles (Eagly & Mladinic, 1994). Therefore, stereotypes promote a broader ideology in which gender inequality is seen as 'the natural order of human life' (Eagly et al., 2000, p. 134). In her book 'The velvet glove' Mary Jackman (1994) points out that dominant groups meet subordinate group members who comply with the social hierarchy with positive affection which prevents subordinate groups from rebellion and demanding social change. Not only negative, but also positive stereotypes take a key role in the rationalization and legitimization of existing social structures. This significance of this ambivalence has been emphasized by a number of authors (e.g. Glick & Fiske 2001a; Jackman, 1994; Dixon, Levine, Reicher, & Durrheim, 2012).

Applying this thought more specifically to gender relations, Ambivalent Sexism Theory (Glick & Fiske, 1996) takes the ambivalence of stereotypes towards women into account. The theory differentiates between hostile and benevolent sexist attitudes towards women. *Hostile sexism* is defined as sexist antipathy, suggesting that women strive to control men, for example through feminist ideology or sexuality. *Benevolent sexism* includes beliefs that are subjectively favorable but patronizing. For example, women are idealized, characterized as pure and indispensable for men, but also as weak and needy for protection

(Glick & Fiske, 1996). Benevolent sexism is a crucial mechanism that holds gender relations in place, since it is socially accepted, even shared by many women, but still ties women to conventional gender roles and prevents women's resistance towards hierarchical gender inequalities (Glick & Fiske, 2001a; 2001b; 2001c).

The theory specifies three sub-dimensions, each of which has a hostile and benevolent component. The first dimension is *patriarchy*, defined as male structural power. The hostile component is *dominative paternalism* which involves the fear that women may gain power over men for example in the notion that women exaggerate about discrimination at work, or the belief that in a heterosexual relationship the man is supposed to make important decisions. The benevolent component of this dimension is *protective paternalism* as the belief that men are supposed to protect the woman they depend on and provide for her. This can be shown in the notion that women should be rescued before men in case of an emergency, or that the man should take the provider and protector role within the household (Glick & Fiske, 2001c).

The second dimension *is gender differentiation*. On the hostile side, it can be *competitive gender differentiation* when men make downward comparisons towards women in order to increase their collective self-esteem. This includes the belief that women are generally inferior to men when it comes to competence (Glick & Fiske, 2001c). However, stereotypes about women are mostly positive. These stereotypes are related to warmth and communal traits, associating women with domestic duties and child rearing, thus reinforcing conventional gender roles. This *complementary gender differentiation* is the benevolent component of the dimension (Glick & Fiske, 2001c).

The third dimension is *heterosexuality*. Glick & Fiske (2001c) argue that heterosexuality will likely remain a determinant of gender ideology as a cultural norm based in human reproduction. *Heterosexual hostility* is the hostile component that links sex with power and involves the belief that women's sexuality is dangerous to men for its potential to let women regain power over men. *Heterosexual intimacy* as the benevolent counterpart comprises the belief that for both men and women a heterosexual romantic relationship is essential to achieve true satisfaction in life (Glick & Fiske, 2000c).

The Ambivalent Sexism Inventory (ASI) was developed as a measure of hostile and benevolent attitudes towards women (Glick & Fiske, 1996). Factor structures obtained with the ASI in samples in the United States (U.S.) reveal two distinct but related factors for hostile and benevolent sexism, with the three sub-factors for benevolent sexism, but only a single factor for hostile sexism (Glick & Fiske, 2001c). The ASI has been applied across cultures (e.g. Glick et al., 2000, 2004). While on the individual level, the correlation between hostile

and benevolent sexism is low to moderate, the analysis of national averages reveals correlations close to .9 between the two dimensions (Glick & Fiske, 2011). Confirmatory Factor Analyses (CFA) reveal mixed results across countries. In some samples, the same model as found in U.S. samples has the best fit, while in others it is a two-factor model with hostile and benevolent sexism (Glick et al., 2000; 2004). Data from Portugal reveals medium levels of both hostile and benevolent sexism in comparison to other countries (Glick et al., 2000, 2004). Correlations between hostile and benevolent sexism within a Portuguese sample reveal a moderate and significant correlation for women, while for men the correlation is not significant (Glick et al., 2000). Moreover, for the Portuguese sample, CFA reveals that the factor structure as found in U.S. samples has the best fit as compared to a one- or two-factor model (Glick et al., 2000).

Negative effects of hostile, but also benevolent sexism haven been proven in a number of studies (for an overview see Glick & Fiske, 2011; Barreto & Ellemers, 2005). For example, both hostile and benevolent sexism have been shown to be related to legitimizing attitudes towards domestic violence (Glick, Sakalli-Ugurlu, Ferreira, & Souza, 2002). Men's endorsement of benevolent sexist attitudes was shown to be related to negative reactions towards female rape victims (Abrams, Vicky, Masser, & Bohner, 2003). Women's endorsement of benevolent sexist attitudes was shown to be related with increased acceptance of ostensibly protective restrictions through a male partner on career aspirations (Moya, Glick, Expósito, De Lemus, & Hart, 2007). Moreover, priming benevolent sexism increased system-justification beliefs among women which are negatively related with resistance towards inequality (Jost & Kay, 2005).

Later on, Glick and Fiske expanded their theory through a theoretical analysis of attitudes towards men and the development of the Ambivalence Toward Men Inventory (AMI), which measures attitudes towards men and thus constitutes the counterpart of the ASI (Glick & Fiske, 1999). Again, they differentiate between hostile and benevolent attitudes. While the benevolent component legitimizes traditional gender relations, hostile attitudes toward men rather reflect a resentment, evoked by men as the group in power. However, it does not represent a form of conscious feminism. Benevolent, but not hostile attitudes toward men correlate with the ASI scales (Glick & Fiske, 2001c).

A related theoretical approach with a broader scope, which analyses and systematizes the content of stereotypes about social groups in general, is the Stereotype Content Model (SCM; Fiske, Cuddy, Glick, & Xu, 2002). Again, the key role of complementary ambivalent stereotypes in the rationalization and maintenance of social structures is emphasized (Glick &

Fiske, 2001a; Fiske et al., 2002). According to the model, members of social groups are evaluated on two independent stereotype dimensions: *warmth* and *competence*. Positive evaluation on one dimension does not imply a negative evaluation on the other dimension. The evaluation is predicted by status and competition – noncompetitive, low-status groups are typically evaluated as warm but incompetent, while competitive, high- status groups are typically evaluated as competent, but low on warmth. Further, the model predicts differential intergroup emotions, depending on the combination of stereotypes on the two dimensions, such as *pity* (groups high on warm but low on competence), *envy* (groups high on competence but low on warmth), *admiration* (groups high on both warmth and competence) or *contempt* (groups low on both warmth and competence) (Fiske et al., 2002).

Research on stereotypes about women through the framework of the SCM reveals that feminists were rated as low on warmth and medium competent and housewives were rated positively on both dimensions (Cuddy, Fiske, & Glick, 2008). This relates with AST according to which women who comply to conventional gender roles are evaluated positively, while women who challenge conventional gender roles are evaluated negatively (Glick & Fiske, 2000c).

Development of gender stereotypes and ambivalent sexism in childhood

The developmental perspective on gender is crucial for a deeper understanding of gender relations in adulthood. Children start to use gender stereotypes early and persistently and stereotyping automatizes rapidly and by adulthood often occurs unconsciously (Zemore et al., 2000). Since children develop gender awareness in early childhood, this may be a critical phase for intervention (Glick & Hilt, 2000), as the periods in which children are most flexible and open are when new concepts are formed (Ruble, 1994).

Gender is the first social category that children learn to distinguish (Zemore et al., 2000). Studies using preferential looking paradigms have shown that as early as 3 to 4 months, children are able to distinguish between males and females (Quinn, Yahr, Kuhn, Slater, & Pascalis, 2002). Further, gender already influences interactions between 8-month-old children (Maccoby, 1998), and by the age of 9-11-month children are able to make associations between male or female faces and voices (Martin, Ruble, & Szkrybalo, 2002).

Gender constancy, defined as 'children's developing sense of the permanence of categorical sex' (Ruble et al., 2006, p. 861) is a central component in the development of gender behaviors and concepts (Kohlberg, 1966). In order to develop gender constancy, children pass through three consecutive stages. The first one, basic *gender identity*, refers to the identification of the own sex and is typically acquired before the age of three (Ruble et al.,

2006). The second stage, *gender stability*, implies the understanding of gender as a fixed characteristic that does not change across time and is acquired between the age of 3 and 5 years (Taylor, Ruble, Cyphers, Greulich, & Shrout, 2007). The third stage, *gender consistency*, adds the understanding that gender does not change through superficial alterations in activities or appearance and is typically developed between the age of 5 and 7 years (Maccoby, 1990), however findings vary across studies (see Ruble et al., 2006).

As shown in a review by Ruble & Martin (1998), knowledge about gender stereotypes accumulates throughout childhood. Between the age of 2 and 3, children first develop the awareness that adult possessions, physical characteristics and roles differ according to gender and soon after start to associate toys and activities with gender. By the age of 5, they associate gender with specific personality traits. Meta-analysis shows that by the age of 6 to 7 years, basic gender stereotype knowledge is ceiling and only shows further change in case a broad range of stereotype domains is assessed (Signorella, Bigler, & Liben, 1993). As Signorella and colleagues (1993) conclude from their extensive meta-analysis of measures of gender development, it is crucial to distinguish between measures that assess knowledge of stereotypes and measures that assess attitudes towards the stereotypes. Until the age of about 7, stereotypes are held quite rigidly and then start to become more flexible, which means that children become more accepting of counter-stereotypical preferences and behaviors. In a longitudinal study, stereotype beliefs were found to peak at 5 or 6 years, and then increase drastically in their flexibility two years later (Trautner, Ruble, Cyphers, Kirsten, Behrendt, & Hartmann, 2005).

Literature on childhood gender relations through the framework of AST is very rare. There is a book chapter in which Peter Glick and Lori Hilt (2000) describe the development of gender relations throughout childhood and adolescence until adulthood from the perspective of AST. Their main thesis is that there is 'a critical developmental transition from a wholly hostile, as well as cognitively simple, gender prejudice that is typical of young children to a volatile, complex, and ambivalent form of prejudice that begins to emerge during puberty' (Glick & Hilt, 2000, p. 9). According to the authors, this transition is fueled by the increase of sexual interdependence which evokes benevolent forms of sexism while part of the earlier hostility remains both on side of men and women. Thus, gender prejudice becomes more complex throughout adolescence and the emerging ambivalence is critical in maintaining a system that disadvantages women (Glick & Hilt, 2000).

Glick and Hilt (2000) argue that the dimension of heterosexuality is not yet important for the understanding of gender relations in childhood, because children are not yet strongly

attracted to members of the other sex. However, they also mention the possibility that children's heterosexual affection is actively inhibited through teasing, which then changes with puberty. Thus, the relevant dimensions are the hostile components of gender differentiation and power. Competitive gender differentiation is discussed as the most relevant motivation in explaining childhood gender prejudice. In order to explain the pervasive hostility, the authors mainly draw on Social Identity Theory (Tajfel & Turner, 1986), arguing that complex beliefs about the characteristics of in- and outgroup members don't yet exist in early childhood, but ingroup identification is very strong and leads children to over-generalize comparisons between boys and girls and to a simplistic good/ bad dichotomy (Glick & Hilt, 2000). These predictions relate with the theoretical approach of Social Identity Developmental Theory (Nesdale, 1999) which focuses on ethnic prejudice.

It has been discussed by a range of authors that the developmentally increasing awareness of gender identity is leading to an increasingly favorable view of the ingroup (Kohlberg, 1966; Tajfel, 1978; Yee & Brown, 1994; Ruble et al., 2006). For example, a study by Yee and Brown (1994) has shown that girls from the age of 3 and boys from the age of 5 favored their own gender as compared to the opposite gender. This ingroup favoritism was strongest at age 5 and slightly declined after. An interesting finding is that ingroup favoritism was more evident in girls than in boys. In a more recent study, both explicit and implicit own-gender preference has been assessed in participants from age 5 until adulthood. Results reveal that implicit own-gender preference is stronger in girls than boys from the age of 5. This difference increases continuously until adulthood with girls showing more and boys less own-gender preference. Similarly, both boys and girls show high levels of explicit own-gender preference in the youngest age group, but while for girls the level is constant until adulthood, for boys it decreases drastically with age (Dunham, Baron and Banaji, 2016). With regard to the reasoning of Glick and Hilt (2000), these results suggest that even before puberty gender relations are more complex than pure ingroup favoritism.

Shedding light on the hypothesis on the developmental course of ambivalent sexism from childhood to adolescence, a number of studies have been conducted which measure ambivalent sexism in adolescents, using the Inventory of Ambivalent Sexism in Adolescents (ISA; De Lemus, Castillo, Moya, Padilla, & Ryan, 2008). Generally, sexism was found to decrease throughout adolescence (De Lemus et al., 2008; De Lemus, Moya, & Glick, 2010). However, benevolent as compared to hostile sexism was found to be stronger in adolescents (De Lemus et al., 2010; Vandenbossche, Spruy, & Keppens, 2017). Several interesting observations have been made. In a study with 12-19-year-old adolescents, relationship

experience was found to be related with higher levels of hostile sexism in boys and higher levels of benevolent sexism in girls (De Lemus et al., 2010). Moreover, adolescent young women were shown to approve more of benevolent sexist behaviors compared to older women (Montañés, de Lemus, Moya, Bohner, & Megías, 2013). One study allows particularly interesting insights into the transition of hostile and benevolent sexism from late childhood to adolescence. The ISA was answered by 10-15-year-old participants. Benevolent sexist attitudes, across dimensions, were found to be stable across age groups, while hostile sexist attitudes decreased with age (Cavadas, 2018). Overall, these findings support prior hypotheses of Glick & Hilt (2000) in a way that benevolent sexism is highly prevalent and positively valued in adolescence. However, the finding that benevolent sexism is decreasing with age raises questions about the prevalence of benevolent sexist beliefs in childhood, before puberty.

As predicted by SRT, stereotypes and gender roles foster social expectancies about the behavior of men and women which leads to behavioral confirmation of the stereotypes (Eagly et al., 2000). According to Bem's (1983) Gender Schema Theory, children acquire networks of associations related to males and females which are embedded in cultural norms. With age, their readiness to process information along these schemas increases and their preferences and behaviors assimilate towards the learned associations with their own gender. Findings on career preferences in childhood reveal that young girls compared to boys show more interest in traditionally feminine occupations (Weisgram, Bigler, & Liben, 2010), although these occupations are rated lower in salary, power and altruism by both males and females (Liben, Bigler, & Krogh, 2001). A meta-analysis by Signorella (1999) shows that for girls, non-stereotyped attitudes relate to disliking for feminine occupations, while for boys non-stereotyped attitudes related to liking for feminine occupations. In relation to AST, a study with 11-18-year-old girls found a negative relation between girl's endorsement of benevolent sexist beliefs and their goal to obtain an academic degree, and a positive relation with traditional goals (Montañés, de Lemus, Bohner, Megías, Moya, & Garcia-Retamero, 2012).

The present research: goals and hypothesis

To my knowledge, no previous study has analyzed gender relations in childhood through the framework of AST. Two studies were conducted to fill this gap and gain a nuanced understanding of the development of ambivalent sexist beliefs.

The first study includes a systematic literature review in which literature on gender development is systematized and analyzed with the aim to develop a clear idea on what has already be found regarding the endorsement of hostile and benevolent stereotypes in

childhood. Measures that have been applied to assess gender development have been previously analyzed in a meta-analysis by Signorella, Bigler and Liben (1993). However, the present systematic literature review has a unique focus, analyzing existing measures through the lens of AST. The specific research questions are: How prevalent is the assessment of each subcomponent of ambivalent sexism among young children? What are the typical examples that objectify each subcomponent of ambivalent sexism among children? What is the prevalence of ambivalent sexism among children? How does it change developmentally?

The second study proposes the validation of the Childhood Ambivalent Sexism Measure (CASM) as a new measure of ambivalent sexism in childhood. One goal of this study is to test the internal structure of the CASM. The measure is applied in a sample of 7-10-year-old children in Portugal. Since for ambivalent sexism in childhood there is no previous data on either stereotype knowledge or personal beliefs, the CASM consists of two parts – one to assess stereotype knowledge and one to assess endorsement of stereotype beliefs. The specific research questions are: What is the prevalence on children's ambivalent sexism (stereotype knowledge and endorsement of stereotype beliefs)? Does it differ by age or gender?

As previously shown, gender stereotype knowledge develops continuously throughout childhood and is already well developed by the age of 6 years (Signorella et al., 1993; Ruble et al., 2006). Therefore, it is expected that children at the age of 7-10 already show high levels of knowledge of stereotypic situations exemplifying both hostile and benevolent sexism (Hypothesis 1a). Stereotype knowledge is expected to be stable across age groups (Hypothesis 1b) and no gender differences (Hypothesis 1c) are expected.

Previous findings on flexibility regarding stereotypes (Signorella et al., 1993; Trautner et al., 2005) have shown that from the age of 7 to 8, children start to become increasingly flexible regarding gender stereotypes. Social norms play a major role in children's development of intergroup attitudes and with age, children become increasingly aware of norms of fairness towards the outgroup (for an overview, see Rodrigues, Rutland, & Collins, 2016). Benevolent sexist beliefs as compared to hostile beliefs are socially accepted (Glick & Fiske, 1996; 2000c). It is therefore expected for the present study with a sample of 7-10-year-olds, endorsement of hostile sexism is lower than endorsement of benevolent sexism (Hypothesis 2a). This prediction is also in line with previous findings of Cavadas (2018), who found benevolent sexist beliefs to be highly present in a sample of 10-11-year-old children. With age, endorsement of both hostile and benevolent sexist beliefs is expected to decrease, but more so for hostile sexism (Hypothesis 2b). Moreover, it is expected that girls endorse

less stereotype beliefs than boys, which is based on results of the meta-analysis by Signorella and colleagues (1993). Since benevolent sexism is shared by women to a higher extent that hostile sexism (Glick & Fisk, 2000c), it is expected that with girls endorse lower levels of hostile but not benevolent sexism than boys (Hypothesis 2c).

The second aim of this study is to understand how hostile and benevolent sexism is related to future career aspirations of the children. Therefore, children's behavioral intentions regarding future professions along the stereotype dimensions of warmth and competence (see SCM; Fiske et al., 2002) were assessed. Further research questions are: Does stereotype knowledge of hostile and benevolent sexism have an effect on children's future career aspirations? Is this effect mediated by personal endorsement of stereotype beliefs and moderated by gender? See Figure 1.1. for the conceptual model. Considering social-developmental research on social norms, children's knowledge of descriptive norms may influence their personal endorsement of these beliefs (see Rodrigues et al., 2016). The moderated mediation model allows to analyze both direct effects of stereotype knowledge on interest in professions and indirect effects through personal endorsement of stereotype beliefs.

Based on findings regarding career aspirations of young children (Weisgram et al., 2010), it is expected that gender will affect career aspirations (Hypothesis 3a). Moreover, previous research suggests that stereotypes play a major role in the behavioral confirmation of gender roles (Eagly et al., 2000; Montañés et al., 2012; Signorella, 1999). Therefore, it is expected that both hostile and benevolent stereotypes will predict children's behavioral intentions regarding career aspirations along the stereotype dimensions of warmth and competence (Hypothesis 3b).
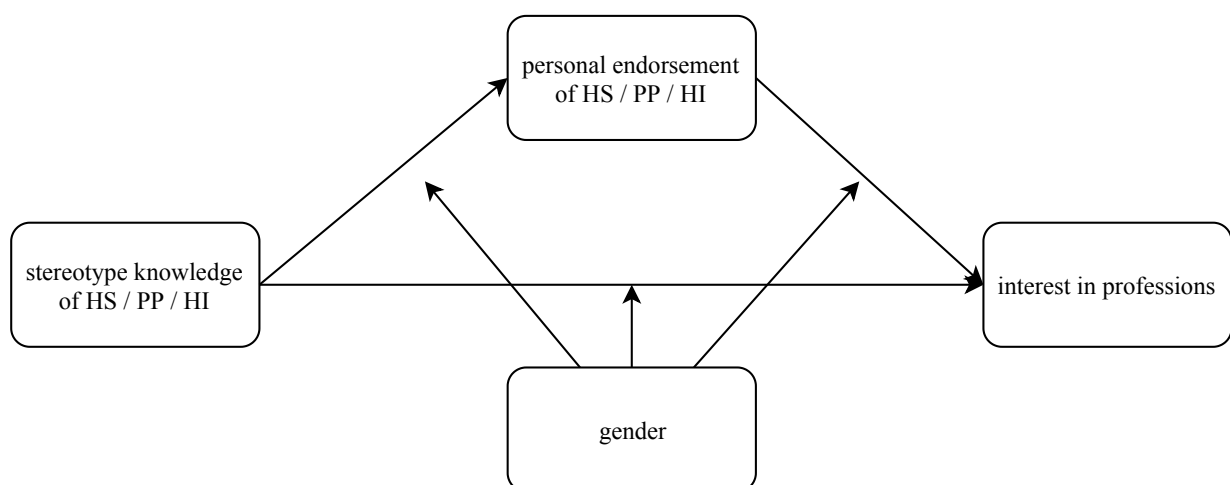

Figure 1.1. Moderated mediation model. Interest in professions (outcome variable) predicted by stereotype knowledge of HS = hostile sexism, PP = protective paternalism, HI = heterosexual intimacy, mediated by personal endorsement of stereotype beliefs of the same dimension, moderated by participant's gender.

Chapter II – Systematic Literature Review

A systematic literature review was conducted in order to systematize and analyze existing literature on gender knowledge through the framework of AST.

Methods

The databases PsycINFO, PsycArticles, ERIC and SocINDEX were searched using the following search terms: (stereotype? OR stereotype belief? OR belief? OR stereotyping OR schema OR gender knowledge OR stereotypic knowledge) AND (gender OR sex) AND (children OR childhood OR child OR infant). The literature search was carried out throughout the month of August 2018. Studies were included only if peer reviewed, published in English language and if they include at least one measure of knowledge about gender differences. If this knowledge is expressed as a stereotype of or attitude towards the other gender or assessed through behavioral indicators, the measure was included. Measures of gender identity or stereotyping of the self were not included. The inclusion criteria for the age of participants was set from 0 to 12 years. If older participants took part as well, the study was only included when the results were analyzed separately for one age group up to 12 years. The inclusion criteria for publication year was set to 2010 to 2018. This period was chosen based on two criteria: first, it should allow to identify an adequate number of studies for a systematic literature review. Second, focusing on the most recent period should increase the likelihood of meaningful observations regarding AST dimensions. AST was first developed in 1996 for adults, entailing increasing awareness of benevolent sexism as key mechanism in the maintenance of gender status relations throughout the following years. Therefore, it is expected that only recently this development in mainstream adult literature may have influenced what is studied in the social developmental context.

The Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) framework was used. The initial search generated 1669 results, 1244 of which remained after duplicates were removed and were screened for eligibility. 96 articles met the inclusion criteria. These articles were analyzed with regard to AST. Only studies with measures that exemplify hostile or benevolent sexism were further included, resulting in a final selection of 42 articles. This means that only measures with an evaluative component were included, while measures of purely descriptive stereotypes were not included. Inclusion decisions were made by two independent judges. The comparison between included articles by the two judges revealed almost perfect agreement, with Cohen's k = .88. There was disagreement about the inclusion of 9 articles. After discussion, both judges agreed that 6 of these articles should be included in the analysis.

See Figure 2.1. for the PRISMA flow chart of article inclusion. It is important to note that studies were included if the measures test and allow for an outcome that taps into hostile or benevolent sexism, independent of whether the actual result displays levels of hostile or benevolent attitudes or behaviors.
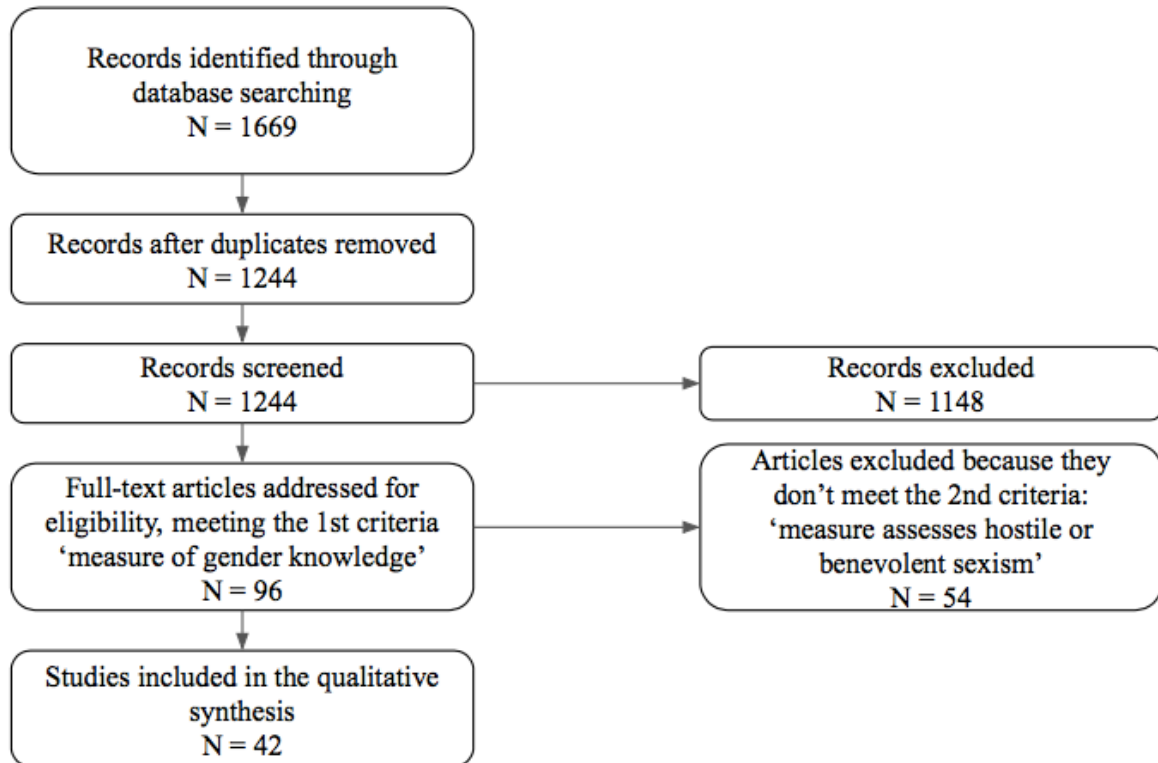
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┌─────────────────────────┐
│ Records identified through│
│   database searching     │
│       N = 1669           │
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│    Records screened      │──────▶ │    Records excluded      │
│       N = 1244           │        │       N = 1148           │
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┌─────────────────────────┐         │ Articles excluded because they │
│ Full-text articles addressed for │──▶│  don't meet the 2nd criteria:  │
│ eligibility, meeting the 1st criteria │ │  'measure assesses hostile or  │
│ 'measure of gender knowledge'    │    │     benevolent sexism'         │
│       N = 96             │         │       N = 54             │
└─────────────────────────┘         └─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│ Studies included in the qualitative │
│        synthesis          │
│       N = 42             │
└─────────────────────────┘
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Figure 2.1. PRISMA flow chart of article inclusion.

Data from the studies that meet all inclusion criteria were entered into a table. Specifically, the reference, sample characteristics, measure(s) of ambivalent sexism and results were summarized. Finally, the studies were categorized along the dimensions of AST. The results are displayed in Table 2.1. (see Appendix A).

Results

Overview of studies

A total of 42 articles were included in the qualitative analysis. The studies were conducted in the following countries: U.S. (48%), United Kingdom (U.K; 10%), Italy (10%), Germany (5%), Singapore (5%), France (5%), Netherlands (2%), Belgium (2%), Philippines (2%), Serbia (2%), Greece (2%), South Korea (2%), Chile (2%), Canada (2%).

See Table 2.2. for an overview of the types of measures that were included in the analysis, with typical examples for each type of measure, categorization along the AST dimensions and how many articles have applied this type of measure.

Table 2.2.

Overview on the types of measures included in the systematic literature review.

Type of measure	Typical example(s)	Ambivalent sexism dimension	Number of articles*
Overall liking/ preference for boys/ girls	Halim, Ruble, Tamis-LeMonda, Shrout, Amodio, 1017; Cvencek, Greenwald, Meltzoff, 2011; Zosuls et al., 2011	General hostility	3
Who is better at…? Boys/ girls?	• Explicit stereotypes regarding math/ spatial ability/ math/ art/ language, e.g. Neuburger, Ruthsatz, Jansen, Quaiser-Pohl, 2015	Competitive gender differentiation	12
Who should do/ be …? Boys/ girls/ both boys and girls?	• Studies applying the COAT-AM or POAT-AM (occupations, activities, traits), e.g. Patterson, 2012 • Gender association task: Mulvey, Rizzo, Killen, 2016	Competitive and complementary gender differentiation	5
Who can do/ be …? Boys/ girls/ both boys and girls?	• specific items e.g. hammer/ iron: Banse, Gawronski, Rebetez, Gott, Bruce Morton, 2010 • occupations, activities, aggressive behaviors, prosocial behaviors: Baker, Tisak, Tisak, 2016	Competitive and complementary gender differentiation	1 1
Implicit measures: stereotypic associations	• IAT for association between boy/ girl and math/language/ art/ spatial ability, e.g. Cvencek, Meltzoff, Kapur, 2014 • association of occupations with gender: Wilbourn & Kee, 2010	Competitive gender differentiation	7 1
Judgements of challenging gender stereotypes or non-stereotypical preferences	• judgement of preference for gender-conforming vs. non-conforming peers, e.g. Braun, Davidson, 2017 • acceptance of counter-stereotypic preferences/ behaviors, e.g. Park, Lee-Kim, Killen, Park, Kim, 2012	Competitive gender differentiation	6

	• judgement of exclusion from counter-stereotypic activities/ careers, e.g. Mulvey, Irvin, 2018		
Judgement of parental role negotiation	Sinno, Schuette, Hellriegel, 2017	Competitive gender differentiation	1
Judgement of counter-stereotypical experts	Boseovski, Hughes, Miller, 2016	Competitive gender differentiation	1
Rating of prosocial behavior as male/female	Hine, 2017	Complementary gender differentiation	1
Trait associations with male/ female drivers	Granié, Papafava, 2011	Dominative paternalism	1
Preference for male/ female leader	Oliveira, 2016	Competitive gender differentiation	1
Intergroup behavior	• resource allocation, preferred seating distance: Halim, Ruble, Tamis-LeMonda, Shrout, Amodio, 1017	General hostility	1
Intergroup behavior in stereotypic context	• resource allocation in stereotypic context: Rizzo, Killen, 2018	Competitive gender differentiation	1
Qualitative observations or interviews	Kostas, 2018; Hamilton, Roberts, 2017; Breneselovic, Krnjaja, 2016; Paterson, 2014	Heterosexual intimacy, protective paternalism, competitive and complementary gender differentiaton, hostility	4

Note. *Some of the articles include several types of measures and can therefore appear more than once in the counts of articles.

Prevalence of assessment of AST dimensions

Two main observations can be drawn from the analysis of studies through the framework of AST. First, most articles tap into hostile sexism. Second, across the hostile and benevolent component the dimension of gender differentiation has mainly been assessed. In total, 43 quantitative measures were categorized along the AST dimensions. 81% tap into hostile sexism with 9% assessing general hostility, 69% assessing competitive gender differentiation and 2% tap into dominative paternalism. No study was found to assess the dimension of heterosexual hostility. 16% of the measures have included items that tap into both competitive and complementary gender differentiation. 2% assess complementary gender differentiation. Moreover, 4 qualitative studies were included which give insights into children's endorsement of beliefs along the dimensions of heterosexual intimacy, competitive and complementary gender differentiation and general hostility.

On the hostile component, studies that assess general liking or preference of boys or girls (e.g. Cvencek et al., 2011) were included, as they exemplify general hostility between boys and girls. Many studies assess academic stereotypes through asking children whether boys or girls are better at a certain subject (e.g. Galdi, Cadinu, & Tomasetto, 2014). These studies tap into competitive gender differentiation as they test for the belief whether boys or girls are more competent. The same holds for studies applying implicit measures to test for the association between gender and a field of competence (e.g. Cvencek, Meltzoff, & Greenwald, 2011) or between gender and occupations (Wilbourn & Kee, 2010).

Other studies test for the belief whether boys, girls or both boys and girls should do or are able to do a range of activities or occupations or possess a range of traits. This may tap into competitive gender differentiation but is in some cases assessed in one line with examples for complementary gender differentiation. For example, many of these studies employ the childhood or preschool occupations, activities and traits attitude measure questionnaire (COAT-AM or POAT-AM; Liben & Bigler, 2002), which includes items that exemplify competitive gender differentiation such as 'Who should participate in political activities?' but also items that exemplify complementary gender differentiation such as 'Who should be gentle?'. Few studies use alternative measures that follow a similar idea, for example by testing beliefs about the ability of boys, girls or both boys and girls to use certain items or do certain activities (e.g. Banse, Gawronski, Rebetez, Gutt, & Bruce Morton, 2010). A number of studies assess judgements of counter-stereotypic preferences (e.g. Conry-Murray, 2013), behaviors (e.g. Park, Lee-Kim, Killen, Park, & Kim, 2012), careers (e.g. Mulvey & Irvin, 2018) or role negotiation (e.g. Sinno, Schuette, & Hellriegel, 2017). These

studies test for negative evaluation for not complying to traditional gender roles, which taps into hostile sexism. In one study, the belief in the competence of counter-stereotypical experts is assessed (Boseovski, Hughes, & Miller, 2016), which exemplifies another example of competitive gender differentiation. One study assesses associations with male and female drivers (Granié & Papafava, 2011), with results conveying ideas that may tap into dominative paternalism.

On the benevolent component, one study assesses stereotypes regarding aggressive and prosocial behavior (Baker, Tisak, & Tisak, 2016), and another study focuses on stereotypes regarding prosocial behavior (Hine, 2017) which constitutes a major part of positive stereotypes ascribed to women, therefore representing an important example of complementary gender differentiation. The qualitative studies that were included in the analysis provide interesting insights with observations tapping into gender differentiation (Hamilton & Roberts, 2017; Kostas, 2018; Breneselovic, & Krnjaja, 2016; Paterson, 2014) as well as heterosexual intimacy (Kostas, 2018; Paterson, 2014), protective paternalism (Paterson, 2014) and general hostility (Breneselovic & Krnjaja, 2016).

Prevalence of ambivalent sexism in childhood

The results regarding prevalence of ambivalent sexism in childhood will be analyzed and summarized in thematically coherent blocks. The focus of the analysis is to understand whether gender relations in childhood are preeminently characterized by ingroup favoritism or stereotypic knowledge, gender differences in the responses and developmental changes.

A number of measures that tap into general hostility towards the other gender through measures of gender attitudes and intergroup behavior show clear examples of ingroup favoritism (Zosuls et al., 2011; Hilliard & Liben, 2010; Halim et al., 2017). Two studies however reveal a different picture. One finds an overall stronger preference for girls on an implicit measure, as well as more liking for girls than boys on an explicit measure (Cvencek et al., 2011). The second one shows that stereotypic expectations rather than ingroup favoritism predict resource allocation to boys and girls. With increasing Theory of Mind competence, children rather allocate resources based on merit than stereotypes (Rizzo & Killen, 2018).

Results on academic stereotypes are very mixed. Implicit associations between 'boys/ girls' and 'math/ language' are tested in several studies. While in a sample of children from the U.S. boys and girls associate math more strongly with boys than girls throughout grades (Cvencek et al., 2011), in samples with Italian and German children this effect is only evident in girls, but not boys (Passolunghi, Ferreira, & Tomasetto, 2017; Galdi, Mirisola, &

Tomasetto, 2017; Steffens, Jelenec, & Noack, 2010). In samples of Singaporean children, the association is found with both boys and girls, but stronger with boys (Cvencek, Meltzoff, & Kapur, 2014; Cvencek, Kapur, & Melzoff, 2015). In a study with Dutch children, boys associate spatial ability more strongly with boys, while girls associate it same as strongly with boys and girls (vander Heyden, Atteveldt, Huizinga, & Jolles, 2016).

Results on explicit academic stereotypes point towards ingroup favoritism regarding math ability in a number of studies, and more so in younger children (Galdi et al., 2013; Passolunghi et al., 2014; Kurtz-Costes, Copping, Rowley, & Kinlaw, 2014). While one study finds ingroup favoritism to decline with age only for girls (Passolunghi et al., 2014), another study only finds a decline for boys (Kurtz-Costes et al., 2014). Interestingly, one study shows that participants favor males more clearly regarding math ability when the target of the stereotype is an adult as compared to a child (Martinot, Bagés, & Désert, 2012). In a study on stereotypes regarding good conduct and achievement with children in the U.K., children rate girls' abilities as higher (Harley & Sutton, 2013). Explicit attitudes regarding ability across science, technology, engineering and mathematics (STEM) domains, mental rotation and spatial ability show a clearer picture than for math, with both boys and girls rating boys' ability as higher throughout studies (Master, Cheryan, Moscatelli, & Meltzoff, 2017; Neuburger, Ruthsatz, Jansen, & Quaiser-Pohl, 2015; vander Heyden et al., 2016; Moè, 2018).

Studies on ability and stereotypes regarding activities, occupations, traits and objects reveal no effect of age throughout studies (Hillliard & Liben, 2010; Meyer & Gelman, 2016; Patterson, 2012), except one in which stereotype flexibility increases with age (Banse et al., 2010). Results on whether boys or girls show higher levels of stereotyping are mixed. One study doesn't find gender differences (Patterson, 2012), while two studies find that girls endorse higher levels of stereotyping than boys (Meyer & Gelman, 2016; Baker et al., 2016). A study in which children were asked to come up with traits associated with male and female drivers reveals that children describe women as more careful but less skilled drivers who cause more accidents compared to men, which may reveal ideas of dominative paternalism (Granié & Papafava, 2011). Another study has analyzed children's favorite leader, indicating that boys and older children rather chose a male leader, while girls and younger children were more likely to choose a female leader (Oliveira, (2016).

On the side of complementary gender differentiation, two studies give detailed insights on beliefs regarding prosocial behavior. While in one study, both boys and girls reported that both males and females could behave in all prosocial ways (Baker et al., 2016), the second study found that the majority of prosocial activities were rated as feminine, while only those

activities that are highly stereotypic for men were rated as masculine (Hine, 2017).

In the studies on judgement of counter-stereotypical preferences and behavior, one important observation is that gender non-conforming boys are evaluated more negatively than non-conforming girls (Braun & Davidson, 2017; Conray-Murray, 2013) and in the same line children judged a mother who opposes the father to stay at home as more acceptable than a father who opposes the mother to work (Sinno et al., 2017). Although gender non-conformity was generally evaluated less positively than conformity, there was one exception in which girls highly valued non-conformity in other girls as much as conformity (Braun & Davidson, 2017). Another important observation is that children are shown to be increasingly accepting of counter-stereotypical preferences and behavior with age (Park et al., 2012; Conry-Murray & Turiel, 2012; Mulvey & Irvin, 2018), and this effect is shown to be positively linked with development of false belief Theory of Mind in another study (Mulvey, Rizzo & Killen, 2016). A study of implicit association between occupations and gender shows that children's stereotypes were less constrained for females than males (Wilbourn & Kee, 2010). One study has assessed the evaluation of counter-stereotypical experts. While younger children prefer to learn from same-gender participants regardless of expertise, with age they become more accepting to learn from counter-stereotypical experts (Bosevski et al., 2016).

The qualitative studies report observations of highly polarized views on masculinity and femininity such as strong/weak, violent/submissive and adventurous/unadventurous in a discussion of fairytales (Kostas, 2018). In the second study, boys' classroom behavior was described as loud, naughty, silly and interruptive by the children, while girls' classroom behavior was described as sensible, modest and quiet (Hamilton & Roberts, 2017). The discussion of fairytales also reveals children's awareness of the idea of heterosexual intimacy. Children told stories in which a prince fights against the evil in order to save his princess, or which end in marriage between the protagonist and her prince or dream man (Kostas, 2018). The third study reports observations of high levels of hostility between boys and girls in their play behavior: boys were protecting their castle from girls, while girls were making poison for the boys (Brenselovic & Krnjaja, 2016). The fourth study reveals children's endorsement of ideas of protective paternalism. Children shared the expectancy that girls cannot be brave or defend themselves, therefore a male hero is needed to save them (Paterson, 2014).

Discussion

42 articles on the development of gender knowledge in childhood that were published since 2010 and exemplify measures of the AST dimensions were analyzed as part of the systematic literature review. These measures are rather homogenic with regard to

categorization along the dimensions with the majority of the articles assessing beliefs regarding hostile sexism and gender differentiation. Therefore, the results leave gaps in the full understanding of ambivalent sexism in childhood.

Glick and Hilt (2000) have put forth a number of hypothesis regarding the development of ambivalent sexist beliefs. Their main thesis is that gender relations in childhood are characterized by hostility towards the other gender, which only changes with adolescence, when romantic relationships become important and lead to an increase of interdependence which evokes the development of benevolent sexist beliefs. The results of the literature review only partly support this view, while a number of results come across as rather puzzling when considering the theoretical reasoning of Glick & Hilt (2000).

Some studies do support the view that gender relations are preeminently characterized by ingroup favoritism or hostility towards the other gender. This is found in studies on gender attitudes and intergroup behavior (Zosuls et al., 2011; Hilliard & Liben, 2010; Halim et al., 2017) and some of the studies on explicit stereotypes regarding math ability (Galdi et al., 2013; Passolunghi et al., 2014; Kurtz-Costes et al., 2014), which also find a decline of ingroup favoritism with age. Moreover, the negative evaluation of counter-stereotypical preferences and behavior was shown to decrease with age across studies (Park et al., 2012; Conry-Murray & Turiel, 2012; Mulvey, Rizzo & Killen, 2016; Mulvey & Irvin, 2018).

The amount of evidence on benevolent sexism does not allow for a detailed analysis of the developmental course, but the observations made in the qualitative studies (Kostas, 2018; Hamilton & Roberts, 2017; Paterson, 2014) reveal clear examples for the prevalence of stereotypes that tap into the benevolent dimensions of AST in childhood. Throughout the analysis results reveal that children from a very young age show high levels of even complex gender stereotype knowledge. Moreover, throughout studies, the endorsement of stereotype beliefs declines with age or remains stable, but no study has found an increase of stereotypic beliefs with age. Measures of stereotype beliefs do not only tap into competitive, but also complementary gender differentiation, thus suggesting that benevolent stereotypes may be prevalent already in childhood. Taken together, it seems that stereotype congruency is a more dominant influence on children's attitudes and behaviors than ingroup favoritism, which becomes especially noticeable in the study by Rizzo and Killen (2018) in which children base their allocation of resources more on stereotypic context rather than ingroup favoritism. One interesting observation is that in a number of studies, girls were found to endorse higher levels of stereotype beliefs than boys (Passolunghi, Ferreira, & Tomasetto, 2017; Galdi, Mirisola, & Tomasetto, 2017; Steffens, Jelenec, & Noack, 2010; Meyer & Gelman, 2016; Baker et al.,

2016). Given that these stereotypes typically favor boys, such as in ascribing a higher level of math ability to them, this result contradicts the notion of ingroup favoritism.

Another striking finding is that boys are evaluated more negatively for counter-stereotypical preferences and behaviors (Braun & Davidson, 2017; Conray-Murray, 2013; Sinno et al., 2017), or in other words the engagement in female stereotypic activities is valued less. Considered in a broader context of intergroup relations, it seems to be a unique contradictory characteristic of gender relations that from a very young age, there is a tendency that girls are evaluated more positively than boys (Cvencek et al., 2011; Dunham et al., 2016) and this effect increases drastically with age (Dunham et al., 2016), while at the same time masculine attributes are valued more.

Taken together, these results do not clearly speak for the hypothesis that childhood gender relations are characterized purely by ingroup favoritism and hostility. Based on the literature review it seems like children are at least aware of stereotypes that are at the core of the benevolent sexism dimensions. Although gender attitudes and relations in childhood have been frequently studied, the measures applied do not allow for a nuanced perspective on the development of ambivalent sexism in childhood. To what extent they endorse benevolent sexist beliefs at a young age remains to be further tested, calling for a new measure of ambivalent sexism in childhood.

Few limitations need to be considered with regard to the present analysis. First, the lack of studies tapping into the dimension of heterosexuality may be due to the composition of the search term, which did not include terms specifically aiming at heteronormative beliefs. A systematic literature review that is more precisely focused on the development of heteronormative beliefs would therefore be an interesting line of future research. Moreover, extending the inclusion criteria regarding publication period may allow for a more detailed understanding. The present review has focused on the most recent trends in how gender knowledge is assessed in studies with children. As discussed above, this period may be the most comprehensive one in order to gain insights into the ambivalence of stereotypes within childhood. However, an analysis throughout decades may allow for additional insights and for an analysis in possible shifts of focus when assessing gender knowledge in childhood. It remains an open question for future research whether the theoretical input of AST has influenced the understanding and assessment of gender knowledge in childhood.

Chapter III – Childhood Ambivalent Sexism Measure

In order to gain a detailed understanding of ambivalent sexism childhood, the CASM was developed and applied in a sample of Portuguese children. Results were analyzed in relation with children's future career aspirations.

Methods

Participants

A total of 117 children (47% female, 53% male) from 2nd and 3rd grades participated in the data collection voluntarily and with the consent of their parents. The children were between 7 and 10 years old (M_{age} = 8.12, SD = .79).

Measures

Childhood Ambivalent Sexism Measure

The idea of the CASM is to present children with stereotypic scenarios along the AST dimensions, in which different characters are displayed with no indication of gender. Each scenario consists of a drawing with a short description, followed by questions about the gender of characters displayed. For each scenario, stereotype knowledge as well as endorsement of stereotype beliefs is assessed.

In the first part, stereotype knowledge is assessed for all items. Here, participants are asked who they think a certain character in the scenario is, given the options 'I really think it is a boy. / I'm not sure. I think that it might be a boy. / I think it is a boy or a girl. / I'm not sure. I think it might be a girl. / I really think it is a girl.'. At the beginning of this part, participants are instructed as follows: 'Think about what you see in your school, in your neighborhood, how things usually are regarding boys and girls – Who do you think acts the way the characters in the scenarios do?'.

In the second part, endorsement of stereotype beliefs is assessed for all items. Participants are asked for the same characters who they would like these characters to be, given the options 'I would like it to be a boy. / I'm not sure, but I think I would like it to be a boy. / I would like it to be a boy or a girl. / I'm not sure, but I think I would like it to be a girl. / I would like it to be a girl.'. Here, the instructions are as follows: 'This time, we are interested in your personal opinion. How would you like these situations to be? Your answer can be the same or different to your previous answers. Sometimes we agree with things how they are, but sometimes we want them to be different.'.

For the measure, the AST dimension of heterosexual hostility is not taken into account, because it may not be conceptualized in an appropriate way for young children. Moreover, for the hostile sexism component, no distinction is made between the sub-dimensions of

dominative paternalism and competitive gender differentiation, due to a significant conceptual overlap. This is also reflected in studies applying the ASI where factor structures reveal one single factor for the hostile sexism dimension (Glick & Fiske, 2001c). For the benevolent sexism dimension, the aim is to distinguish between the three sub-dimensions. In total, the CASM consists of 10 scenarios, 4 representing hostile sexism (HS) and 6 representing benevolent sexism (BS) - 2 for protective paternalism (PP), 2 for complementary gender differentiation (CGD) and 2 for heterosexual intimacy (HI).

For the scenarios of HS and CGD, there is only one question about one character. For the scenarios of PP and HI, in which two characters are relevant for the stereotypic situation, there are questions about both characters. An example item with one question is 'A group of children is building a wooden house. This child wants to help building it, but the other children say that it is too difficult for the child.' (HS). An example item with two questions is 'A dog is about to attack two children. There is no way for them to escape. One child protects the other child from being bitten.' (PP). The scores range from -2= 'counter- stereotypic answer' to 2= 'stereotype congruent answer' for all items.

The CASM was developed in a stepwise procedure, covering the development of vignettes (short stories with drawings) along the AST dimensions, the selection of vignettes based on experts' ratings and the development of the response format.

Initially, 25 short descriptions of stereotypic situations were designed, 10 for hostile sexism and 5 for each sub-dimension of benevolent sexism (see Appendix B). The selection of 10 final items was empirically based on the judgements of 7 experts. The experts were 4 researchers, 1 university teacher, 1 former researcher and 1 Master student, all working in the field of social psychology, intergroup relations or gender studies. They participated in an online survey in which they were presented with the 25 scenarios. They were asked to categorize each scenario along the AST dimensions, given the options HS, PP, CGD, HI and 'none of these'. They were instructed to select more than one of these options in case they think that a scenario represents more than one dimension. After each set of 5 items, the experts were asked to comment on single items or the general characteristics of the measure.

The key criteria for item inclusion was the agreement of the experts regarding categorization of the item. The final selection of items and the experts' categorization are displayed in Table 3.1.

Table 3.1.

Selected items for the CASM and expert's categorization along AST dimensions.

Item	Expert's rating				
	HS	PP	CGD	HI	none
HS1: In this school, there has been a competition for smart children to solve difficult mathematical problems. In each class there is one winner. Do you think that the class winners will be more boys/ girls?	100%				
Final item: In this school, there has been a competition for smart children to solve difficult mathematical problems. Who do you think is the winner of the competition?					
HS2: A group of children is building a treehouse. This child wants to help building it, but the other children say that it is too difficult for the child.	100%	29%			
Final item: A group of children is building a wooden house. This child wants to help building it, but the other children say that it is too difficult for the child.					
HS3: In a school, the teacher of each class asks the children to vote for a classmate who will take the position of a delegate for the class. Every class decides for one delegate. Do you think that the class delegates will be more boys/ girls?	86%		28%		
Final item: In this class, the teacher asks the children to vote for a classmate who will take the position of a delegate for the class. There is one child who doesn't get any vote.					
HS4: A group of children is playing that they are on a boat. One child is the captain of the boat and makes the important decisions.	71%	29%			
PP1: A dog is about to attack two children. There is no way for them to escape. One child protects the other child from being bitten.		100%			
PP2: Two children are walking along a street where many cars are passing. One child insists on walking on the side where the cars are passing, in order to protect the other child.		100%			
CGD1: In a friends' gathering, two families with children get together for dinner. One parent says 'You are so lucky that your child is always so polite and sensitive.'			57%		29%

Final item: In a friends' gathering, two families with children get together for dinner. One parent says 'My child is always really active! Yours is always so polite and sensitive!'			
CGD2: 'This is a family with two children. Today the aunt comes for a visit. While having dinner, the aunt says to one of the children: 'You look really beautiful today!'.	57%	14%	43%
Final item: This is a family with two children. Today the aunt comes for a visit. While having dinner, the aunt says to one of the children: 'You are so brave!', while to the other child she says, 'You look really nice today!'			
HI1: In this movie there is a character who travels very far and goes through many adventures to win the heart of a person.	14%	71%	
HI2: In this movie, there is a character who sits everyday by the window, dreaming and waiting for a person who will do a big effort to win the heart and marry this character.		86%	14%

Note. Final items after adjustments based on expert's comments for HS1, HS2, HS3, CGD1, CGD2.

The agreement regarding categorization along the AST dimensions was good for HS, PP and HI and moderate to low for the dimension CGD. Final adjustments were made for single items based on the experts' comments, especially the items for CGD as a response to the rather low agreement rates. The following items were changed after the expert survey: HS1, HS2, HS3, CGD1, CGD2. See Table 3.1. for the final items and Appendix C for the full vignettes including drawings.

Measure of future career aspirations

This measure aims to assess children's future career aspirations along the stereotype dimensions of warmth and competence. Participants are presented with 6 different occupations, 3 of which require a higher level of warmth than competence, and the other 3 require a higher level of competence than warmth. The aim is to assess which professions children would like to do the most and which ones the least in the future.

For this purpose, the best-worst scaling method is applied (see Louviere, Flynn, & Marley, 2015). It is a multiple-choice extension of the 'Method of Paired Comparisons' which is rooted in Random Utility Theory (Thurstone, 1927). Comparison sets of fixed size, in this case 3 items per set, are presented to the participants who are asked for each set to indicate the profession they would like to do most in the future and the profession they would like to do least in the future. In order to form the comparison sets, balanced incomplete block design (BIBD) is used to create sets in which all items occur equally often and also occur equally often with each other item. In this case, the BIBD results in 10 blocks of 3 items each. Each item should appear 5 times. The main advantage of this approach as compared to rating scale measures is that it eliminates response biases. In the present context, all professions may be desirable which in a rating scale procedure may lead to generally positive ratings and high correlations between the options. For each item, the number of times it was chosen as 'least want to do' is subtracted from the times it was chosen as 'most want to do'. The result should be divided by 5. Thus, scores range from -1 (indicating the lowest aspiration) to +1 (indicating the highest aspiration) (Louviere et al., 2015; Lee, Sneddon, Daly, Schwartz, Soutar, & Louviere, 2016). When implementing the measure, one mistake was made: one profession (higher on competence than warmth) appears 6 times, while another one (higher on warmth than competence) appears only 4 times. As the final count is divided by the number of times the item appeared, this mistake does not have a large impact on the overall result.

Mean scores are created for the 3 professions that require higher a level of warmth and the 3 professions that require a higher level of competence. An aggregated variable was computed for preference for professions higher on competence or warmth, with negative

values indicating higher interest in professions higher on warmth, and positive values indicating higher interest in professions higher on competence.

The professions were chosen based on a validation survey with a sample of 62 Portuguese participants (81% female, 19% male). Participants were asked to rate for 16 different professions whether they require a high level of competence and warmth on a scale from 1= 'not at all' to 5= 'a great amount'. The final inclusion of profession was based on the mean difference of participant's rating on the warmth/ competence dimensions. For all included professions, the difference between the rating on the warmth and competence dimension was significant. See Table 3.2. for the results.

Following professions were included: pilot, scientist and engineer as professions rated higher on competence than warmth; kindergarten teacher, salesperson and school helper as professions rated higher on warmth than competence.

Table 3.2.

Results of validation study: rating of warmth and competence required for 16 professions.

Profession	*M* (*SD*) Competence	*M* (*SD*) Warmth	Paired-sample *t*-test
Cientista	4.53 (0.84)	2.81 (0.83)	12.84**
Piloto	4.65 (0.83)	3.03 (0.94)	11.18**
Engenheiro/a	4.37 (0.87)	3.02 (0.90)	10.24**
Mecânico	4.19 (0.90)	2.89 (0.91)	9.15**
Advogado	4.42 (0.97)	3.76 (0.99)	5.01**
Gerente	4.21 (0.87)	3.79 (0.87)	3.68**
Dono/a de casa	3.63 (0.91)	3.24 (1.00)	3.22*
Agente da Polícia	4.35 (0.93)	3.95 (0.95)	2.87*
Médico	4.68 (0.84)	4.39 (0.91)	2.82*
Enfermeiro/a	4.69 (0.67)	4.61 (0.69)	1.23
Florista	3.45 (0.94)	3.63 (1.03)	-1,26
Auxiliar de Geriatria	4.21 (0.85)	4.42 (0.78)	-1.82
Professor/a de Ensino Primário	4.47 (0.74)	4.68 (0.54)	-2.52*
Vendedor/a	3.82 (0.95)	4.21 (0.89)	-2,92*
Educador/a de Infância	4.34 (0.75)	4.76 (0.47)	-4,02**
Auxilar de ação educativa	3.89 (0.98)	4.61 (0.58)	-5.95**

Note. M = Mean. *SD* = Standard Deviation. **. p < .01 (2-tailed). *. p < .05 (2-tailed).

Socio-demographics

Last, participant's gender, age, grade, nationality and ethnicity were assessed.

Procedure

All measures were translated to Portuguese. Ethical approval for the study was given by the ethical committee of ISCTE-IUL. Data was collected in two schools in Lisbon, Portugal. The school's directors were contacted and requested to collaborate with the research project. After approval from side of the directors was given, informed consent forms (see Appendix D) were distributed to the children, in order to get permission from their legal guardians to participate in the study.

Participants were recruited during school classes by two female investigators. Both investigators were present during the data collection which took place in a separate room in the school building, in sessions with 3-5 children at a time. It took the participants about 20-30 minutes to complete the measures. At the beginning of each session, it was ensured that children understand that their participation is voluntary, can be ended at any moment and that their participation is not related to any advantages or disadvantages in the school classes. Moreover, they were informed about the length of the study and that their answers are confidential and anonymous (see Appendix E). Only if the children wanted to participate and did not have further questions, the investigator moved on to the survey.

The participants answered the measures as presented above individually on a computer with headphones on. E-prime 2.0. was used to create the survey. Separate versions were created for boys and girls, so the profession terms of the measure of future career aspirations were in line with the participant's gender. Instructions were given in text and audio. Participants answered the questions using the keyboard. At the beginning of the first and second part of the CASM, instructions were given verbally by the investigator. Moreover, examples were given in order to practice how the answer format works at the beginning of each measure. At any time, the children could raise their hand to ask questions and the investigator would come over to help. See Appendix E for the study script of the E-prime survey. The sociodemographic questions were assessed verbally by the investigator.

After completing the survey, an extensive debriefing was done verbally with the whole group by the investigator. The aim of the debriefing was to ensure that the measures had no negative impact on the children through making gender categories salient. For that purpose, gender stereotypes were critically discussed and reflected with the group, emphasizing that boys and girls also have a lot in common and that people have their individual characteristics independent of group membership (see Appendix E).

Results

Data analysis was conducted using IBM SPSS version 25.0. For the test and development of the final factor structure of the CASM, priority was given to Part I of the scale for two reasons. First, since Part I is measuring knowledge of the stereotypes, this part should be less influenced by social desirability effects in the answering behavior. Second, these are the answers children first suggest, while Part II may be influenced by the first round of answering the items. Exploratory Factor Analysis (EFA) was computed for the 14 items of the CASM Part I, using principal component factor extraction. The initial analysis revealed a four-factor solution. Varimax rotation was used for the interpretation of the four factors. All items for protective paternalism loaded on the same factor. Both items for complementary gender differentiation as well as and HS1, in which one child wins a competition for smart children to solve difficult mathematical problems, showed low communalities (.35 for HS1;.32 for CGD1; .28 for CGD2) and loaded equally on multiple factors. Based on these findings, the three items were further excluded. Moreover, the item HS4, in which one child is the captain of a boat and makes the important decisions, loaded highest on one factor with the items for PP, indicating that this item does not clearly measure hostile sexism as intended. Therefore, HS4 was further excluded. HS2 and HS3 remain as items for hostile sexism. HS2 displays a child who is excluded from building a wooden house because it is too difficult and HS3 displays a child who doesn't get any vote to be the class delegate. A conceptual distinction between HS1 and HS4 compared to HS2 and HS3 can be observed. While HS1 and HS4 test for the association of higher status position with gender, HS2 and HS3 test for the association of exclusion from certain activities with gender. The two items for HI1 and the two items for HI2 loaded on different factors, indicating that one of them didn't measure the intended concept of heterosexual intimacy. HI1 displays a character who travels very far and goes through many adventures to win the heart of a person. HI2 displays a character who sits everyday by the window, dreaming and waiting for a person who will do a big effort to win the heart of this character. For HI2, participants may have interpreted the character as someone who spends a lot of time thinking about a romantic relationship. This lack of clarity may explain why the items loaded on different factors. Since HI1 is conceptually clearer, this item was further included as a single indicator of heterosexual intimacy.

A second EFA was run with the retained items from the previous analysis. This analysis revealed a three-factor solution. The Kaiser-Meyer-Olkin Measure of sampling adequacy was .54 which is low, but still acceptable. Bartlett's test of sphericity was significant (χ^2 (28, N = 117) = 219.47, $p < .01$). The communalities of all items are >.50 and

the three extracted factors explain 63.71% of variance. See table 3.3. for the rotated component matrix.

The three factors are in line with the concepts of Protective Paternalism (4 items), Heterosexual Intimacy (2 items) and Hostile Sexism (2 items). Cronbach's α was computed for each factor, showing acceptable reliability for PP (α = .75) and good reliability for HI (α = .86). The overall factor for benevolent sexism including 6 items also shows acceptable reliability (α = .72). For HS, the reliability is very poor (α = .19). The correlation between the two items is low and not significant ($r(115) = .10$, $p = .27$). However, the two items are conceptually in line with each other, as both exemplify exclusion from activities that require certain competences. They will be considered jointly in the following analyses, yet the low correlation needs to be taken into consideration.

Table 3.3.

Part I Rotated Component Matrix.

	Component		
	1	2	3
Part I PP2 Question 2	.764	-.010	.031
Part I PP1 Question 2	.707	.076	.156
Part I PP2 Question 1	.704	.188	-.130
Part I PP1 Question 1	.656	.200	-.283
Part I HI1 Question 1	.185	.905	-.064
Part I HI1 Question 2	.130	.886	.038
Part I HS2	-.082	.266	.756
Part I HS3	.024	-.324	.685

Note. Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 4 iterations. Part I = assessment of stereotype knowledge. HS2: A group of children is building a wooden house. This child wants to help building it, but the other children say that it is too difficult for the child. HS3: In this class, the teacher asks the children to vote for a classmate who will take the position of a delegate for the class. There is one child who doesn't get any vote. PP1: A dog is about to attack two children. There is no way for them to escape. One child protects the other child from being bitten. PP2: Two children are walking along a street where many cars are passing. One child insists on walking on the side where the cars are passing, in order to protect the other child. HI1: In this movie there is a character who travels very far and goes through many adventures to win the heart of a person. HI2: In this movie, there is a character who sits everyday by the window, dreaming and waiting for a person who will do a big effort to win the heart and marry this character.

EFA was computed for the same 8 items for the CASM Part II, using principal component factor extraction. The number of factors to extract was set to 3. The Kaiser-Meyer-Olkin Measure of sampling adequacy was .50 which is the cut-off value to be considered as acceptable. Bartlett's test of sphericity was significant (χ^2 (28, N = 116) = 140,90, $p < .01$). The communalities of all items are .40 or higher and the three extracted factors explain 59.17% of variance. See table 3.4 for the rotated component matrix.

The emerging factors are the same as for Part I, but with higher cross-loadings for HI1 question 1 and PP1 question 1. Reliability coefficients for Part II are α = .60 for PP, α = .70 for HI, α = .58 for BS (all 6 items) and α = .31 for HS. The correlation between the two HS items is low and marginally significant (r(114) =.18, p = .05).

Table 3.4.

Part II Rotated Component Matrix.

	Component		
	1	2	3
Part II PP1 Question 2	.775	.126	.217
Part II PP2 Question 2	.696	.123	-.192
Part II PP1 Question 1	.636	-.181	.018
Part II PP2 Question 1	.561	.105	-.264
Part II HI1 Question 2	.159	.872	.152
Part II HI1 Question 1	-.042	.846	-.210
Part II HS2	-.118	.174	.746
Part II HS3	.003	-.223	.693

Note. Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 4 iterations. Part II = assessment of endorsement of stereotype beliefs. HS2: A group of children is building a wooden house. This child wants to help building it, but the other children say that it is too difficult for the child. HS3: In this class, the teacher asks the children to vote for a classmate who will take the position of a delegate for the class. There is one child who doesn't get any vote. PP1: A dog is about to attack two children. There is no way for them to escape. One child protects the other child from being bitten. PP2: Two children are walking along a street where many cars are passing. One child insists on walking on the side where the cars are passing, in order to protect the other child. HI1: In this movie there is a character who travels very far and goes through many adventures to win the heart of a person. HI2: In this movie, there is a character who sits everyday by the window, dreaming and waiting for a person who will do a big effort to win the heart and marry this character.

Table 3.5.

Correlations, Means and Standard Deviations for the CASM Part I and II, the Measure of Future Career Aspirations, Age.

| | CASM Part I | | | | CASM Part II | | | | Professions | | | | |
	PP-BS	HI-BS	BS	HS	PP-BS	HI-BS	BS	HS	Competence	Warmth	Age	*M*	*SD*
Part I													
PP-BS	1	.30**	.80**	-.11	.44**	.02	.32**	-.04	-.08	.08	.06	1.18	.95
HI-BS		1	.81**	-.05	.02	-.08	-.04	-.02	.16	-.16	.14	1.63	.96
BS			1	-.10	.28**	-.03	.17	-.04	.06	-.05	.13	1.41	.76
HS				1	-.01	.06	.03	.13	-.01	.02	.04	-.06	1.16
Part II													
PP–BS					1	.13	.77**	-.12	.00	.00	-.09	1.16	.87
HI-BS						1	.74**	-.07	.03	-.01	.07	1.61	.83
BS							1	-.13	.02	-.01	-.02	1.38	.64
HS								1	.14	-.13	.05	-.16	1.23
Professions													
Competence									1	-.99**	.05	-.01	.36
Warmth										1	-.05	.01	.30
Age											1	8.12	.79

Note. N = 117 for CASM Part I; N = 116 for CASM Part II, N = 114 for Measure of Future Career Aspirations. PP = Protective Paternalism, HI = Heterosexual Intimacy, BS = Benevolent Sexism. HS = Hostile Sexism. **. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

Correlations, means and standard deviations were computed for the aggregated dimensions of PP, HI, BS and HS for both Part I and II, the scores for preference in professions high on warmth or competence and age (see table 3.5). HS is not correlated with BS, nor with the sub-dimensions of BS, for both knowledge and endorsement of ambivalent sexist beliefs. Knowledge and endorsement are not correlated, except for the dimension of PP with a medium, significant correlation. The scores for preference of professions (warmth and competence) as well as age are not correlated with any dimension of ambivalent sexism for either part of the measure.

Results indicate that children's scores for knowledge of hostile sexist stereotypes are on average close to 0, however the variation in the answering behavior is large (M = -.06, SD = 1.16), indicating that participants gave highly polarized answers. Participants show high knowledge of benevolent sexist stereotypes (M = 1.41, SD = .76). Therefore, Hypothesis 1a is partially confirmed as high levels of both hostile and benevolent sexism were expected. The mean value of endorsement of hostile sexist beliefs is negative, indicating that on average participants answered in a counter-stereotypic manner. As for knowledge, the variation in answering behavior is large (M = -.16, SD = 1.23). Participants show high endorsement of benevolent sexist beliefs (M= 1.38, SD= .64). For the aggregated variable for preference for professions, negative values indicate more interest in professions higher on warmth, and positive values indicate higher interest in professions higher on competence. The mean value is close to 0, indicating that across participants, the preference for professions higher on competence or warmth is balanced (M = -0.02, SD = .66).

A two-way ANOVA with gender and age as fixed factors was performed in order to analyze gender and age differences for each of the ambivalent sexism dimensions HS and BS (both knowledge and endorsement), as well as for future career aspirations. Results indicate that there are no significant age differences and no significant age x gender interaction effects for either ambivalent sexism dimension across types of measures. Age differences were expected for stereotype endorsement, but not for personal endorsement. Therefore, Hypothesis 1b is confirmed and Hypothesis 2b is refuted. Gender differences are significant for endorsement for hostile sexist beliefs ($F(1, 107)$ = 4.36, p = .04), with boys (M = .13, SD = 1.32) answering in a more stereotype-congruent way than girls (M = -.49, SD = 1.03). For endorsement of benevolent sexist beliefs and stereotype knowledge (both dimensions), gender differences are not significant. For future career aspirations, values differ significantly by gender ($F(1, 105)$ = 20.69, p < .01), confirming Hypothesis 3a. Age differences and the interaction effects of age x gender are not significant.

As age differences were not significant for any of the ambivalent sexism dimension, nor for future career aspirations, age was dropped from the further analyses.

A three-way repeated measures ANOVA was performed with stereotype level (knowledge vs. personal endorsement) and ambivalent sexism dimension (hostile vs. benevolent) as within-subject factors and gender as between-subject factor. A significant main effect was found for dimension ($F(1, 114) = 222.00$, $p < .01$), but not for stereotype level. The two-way interaction between stereotype level and gender was not significant ($F(1, 114) = 2.25$, $p = .14$). Two-way interactions between stereotype level and dimension, as well as dimension and gender, were not significant with F < 1. The three-way interaction between stereotype level x dimension x gender was found to be significant ($F(1, 114) = 5.74$, $p = .02$).

The main effect of dimension indicates that scores on BS are higher than on HS, for both boys and girls and across types of measures. Thus, Hypothesis 2a, which predicted endorsement of hostile sexism to be lower than endorsement of benevolent sexism, is confirmed. Post-hoc pairwise comparisons were computed for estimated marginal means of the three-way interaction, with least significant differences (LSD) method. Boys scores were significantly higher than girls scores for endorsement of hostile sexist beliefs ($F(1, 114) = 7.89$ $p = .01$), but not for knowledge, nor for knowledge or endorsement of benevolent sexist beliefs. Moreover, for girls, scores on the hostile dimension were significantly lower for endorsement of stereotype beliefs than for knowledge ($F(1, 114) = 4,21$, $p = .04$), but not for boys, nor for girls or boys on the benevolent dimension. See Figure 3.1. for a graphic representation. The hypotheses regarding gender differences are confirmed: on the measure of personal endorsement of stereotype beliefs, girls score significantly lower than boys for hostile sexism, but not for benevolent sexism (Hypothesis 2c), while on the measure of stereotype knowledge no gender differences were found (Hypothesis 1c).

Since the two items that form the HS dimension are not correlated with each other, the interaction effect between type of measure and gender was analyzed for the two items HS2 (displays a child who is excluded from building a wooden house because it is too difficult) and HS3 (displays a child who is receives no vote for being a class delegate) separately. A three-way repeated measures ANOVA was computed with stereotype level (knowledge vs. endorsement) as within-subject factor, item (HS2 vs. HS3) as measure and gender (male vs. female) as between-subject factor. The interaction between stereotype level and gender is significant for HS3 ($F(1, 114) = 10.02$, $p < .01$), but not for HS2 ($F(1, 114) = .20$, $p = .66$). Post-hoc pairwise comparisons were computed for estimated marginal means of the three-way interaction, with LSD method. For HS3, the personal endorsement of stereotype beliefs is

significantly lower for girls than for boys ($F(1, 114) = 20.09$, $p < .01$), while for stereotype knowledge there is no significant difference between boys and girls.
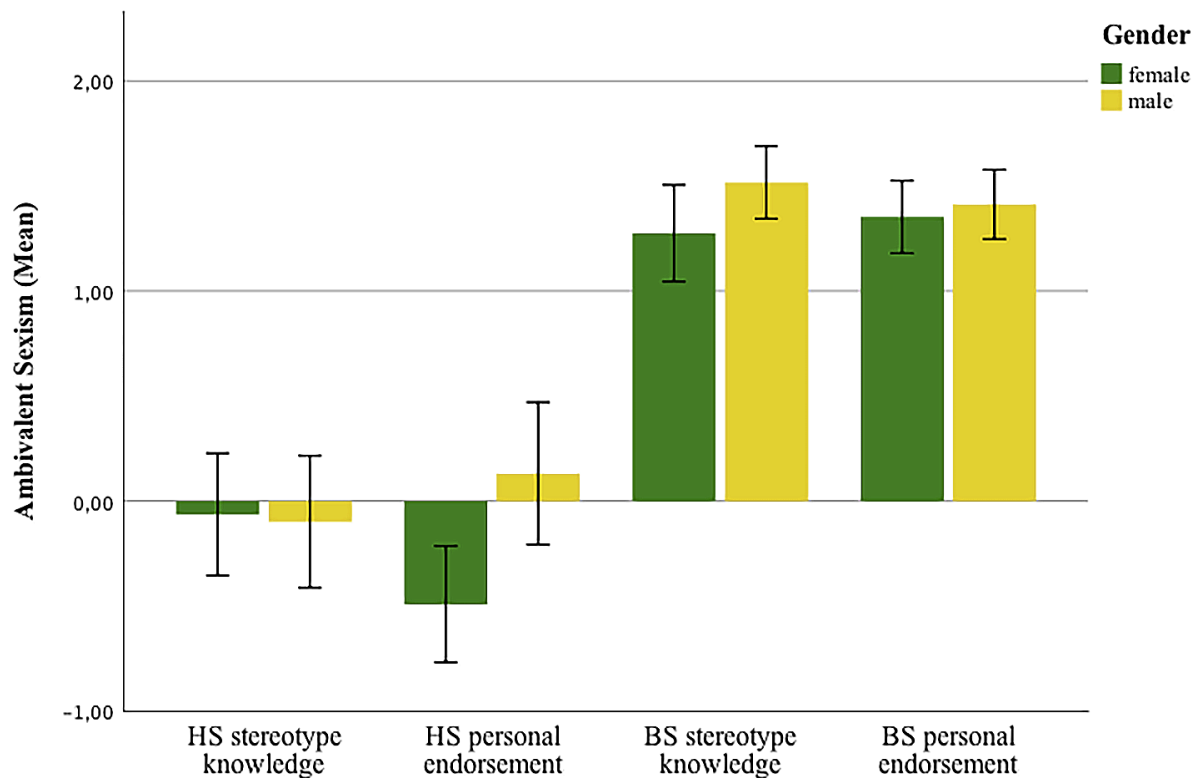
Figure 3.1. Means and 95% confidence intervals displayed for the ambivalent sexism dimensions for both stereotype knowledge and endorsement of stereotype beliefs, each for female and male participants. HS = hostile sexism; BS = benevolent sexism.

Macro PROCESS Model 59 (Hayes, 2013) was used to test the moderated mediation model (see Figure 1.1.) for each of the dimensions HS, PP and HI. See Table 3.6. in Appendix F for an overview on the conditional direct and indirect effects.

Against hypothesis, no significant direct effect of stereotype knowledge of hostile sexism on interest in professions was found for either boys or girls, and no significant indirect effect that goes through personal endorsement of hostile sexism. Gender had a significant effect on personal beliefs ($B = .67$, $t = 3.00$, $p < .01$) and on interest in professions ($B = .84$, $t = 7.97$, $p < .01$).

For PP, again the effect of gender on interest in professions was significant ($B = .71$, $t = 4.03$, $p < .01$). Although the knowledge x gender interaction effect was non-significant, the direct effect of stereotype knowledge of protective paternalism on interest in professions was significant for girls ($B = -.17$, $t = -2.05$, $p = .04$), but not for boys ($B = -.05$, $t = -.67$, $p = .50$). The indirect effect through personal endorsement of protective paternalism was not significant

for both boys and girls. As an effect for both boys and girls was expected, the hypothesis is partly confirmed.

Against hypothesis, stereotype knowledge of heterosexual intimacy did not have a significant direct effect on interest in professions for either boys or girls, and no significant indirect effect that goes through personal endorsement of this dimension was found. Gender had a marginally significant effect on interest in professions ($B = .58$, $t = 1.98$, $p = .05$).

Overall, the results only partly confirm Hypothesis 3b. It was expected that both hostile and benevolent sexism dimensions have an effect on children's interest in professions for both boys and girls, while the results show that only stereotype knowledge of protective paternalism had a significant effect on interest in professions for girls, but not for boys.

Discussion

Although gender inequality prevails in many countries, the relationship between men and women is often seen as justified due to gender stereotypes that result from the differential social roles than men and women hold in society (Eagly, 1987; Eagly et al., 2000; Wood & Eagly, 2012). Children acquire gender stereotypes from early on in life and by the age of six their knowledge of gender stereotypes is already ceiling (Signorella et al., 1993; Ruble et al., 2006). By drawing attention to the ambivalence of stereotypes towards women and the important role of benevolent sexism in the legitimization of gender status relations, Glick & Fiske (1996) have made an important theoretical contribution. Despite a theoretical book chapter (Glick & Hilt, 2000), to my knowledge, the present study is first one to study childhood gender relations through the framework of Ambivalent Sexism Theory. The aims of this study were to develop and validate the CASM as a new measure of ambivalent sexism in childhood, to assess knowledge and endorsement of ambivalent sexist beliefs in a sample of 7-10-year-old Portuguese children and to test whether these beliefs relate with children's future career aspirations.

The internal structure of the CASM found in the present study is different from the expected theoretical model, however it allows to distinguish between three of the four expected ambivalent sexism dimensions. Different factor structures have been obtained with the ASI in cross-cultural studies (Glick et al., 2000; 2004). For a Portuguese sample, the expected model by Glick & Fiske (1996) with two factors for hostile and benevolent sexism and three sub-components for benevolent sexism showed the best fit (Glick et al., 2000). Results obtained with the ISA have suggested a different factor solution. In a Portuguese sample with older children adolescents, a four-factor model with the dimensions of emotional lability, functional asymmetry, protective paternalism and romantic indispensability has been found (Cavadas, 2018).

With the CASM, a three-factor solution with hostile sexism, protective paternalism and heterosexual intimacy was obtained, but no distinct factor for complementary gender differentiation was found. The clearest factor is protective paternalism which showed good factor loadings and reliability for the intended items. The factors of hostile sexism and heterosexual intimacy were formed with less items than expected. For hostile sexism, the two items of this factor were not correlated which suggests that there are conceptual differences between the items. Both items display a child who is excluded from an activity or position, but the context of exclusion differs between the items. For one item the context is academic – it displays a child who does not receive any vote to be the class delegate. The other item

exemplifies exclusion from an outdoor activity – it displays a child who is excluded from building a wooden house, because it is too difficult. The differential results obtained with the two items are further discussed below. The two items for complementary gender differentiation did not form a distinct factor. This result may be due to the fact that conceptually, each ambivalent sexism dimension includes the idea of complementarity between men and women.

The results of the present study contribute to a clearer idea how ambivalent sexism in childhood can be conceptualized and to considerations for the creation of new items, further development and future use of the scale. For the development of new items, it may be useful to have discussions in focus groups with the children to gain insights into their understanding of the situations displayed. Moreover, a factor analysis with a wider range of items would increase the likelihood to find a factor solution with all four distinct and reliable factors.

It was expected that children show high levels of knowledge for both the hostile and benevolent sexism. Findings indicate that scores for stereotype knowledge were higher for benevolent than for hostile sexism. As hypothesized, no significant age and gender differences were found. Although benevolent as compared to hostile sexism is more normative and for this reason may be observed more frequently by the children, it is a rather surprising that on the hostile dimension participants gave mixed answers across the spectrum from counter-stereotypic to stereotype-congruent, so the mean level was around zero. It may be the case that the children in fact did not connect the displayed situations with a specific gender. The instruction for this part of the measure was 'Think about what you see in your school, in your neighborhood, how things usually are regarding boys and girls – Who do you think acts the way the characters in the scenarios do?'. Therefore, an optimistic interpretation of the results would be that the children in fact do not observe that girls compared to boys are more often excluded from the activities displayed in the items (building a wooden house, being voted for as class delegate). For the benevolent items, in contrast, results indicated high levels of stereotype knowledge for all items.

Another possible explanation is that anti-discrimination social norms, as have been hypothesized to hold for the measure of personal opinion, have been prevailing already for the measure of stereotype knowledge. The fact that two female investigators were present in the room during data collection may have added to the salience of anti-discrimination norms and effected the results of the measure. As previous research on racial prejudice has shown, children are highly receptive to the salience of the social normative context through the presence of an investigator (Monteiro, França, & Rodrigues, 2013). Moreover, the similarity

of the results of the two parts of the measure raises the question in how far the children were able to make the distinction between knowledge and personal opinion, however the low correlations between the two parts suggest that they were treated as distinct.

For the measure of personal beliefs, it was found that children endorse higher levels of benevolent compared to hostile sexism. This confirms the expectations which were based on developmental literature on stereotype flexibility (Signorella et al., 1993; Trautner et al., 2005) and social-normative approaches to intergroup relations (see Rodrigues et al., 2016). It was expected that children at the age of 7-10 are already aware of anti-discrimination social norms, and therefore would not display high endorsement of hostile sexist beliefs. As AST posits, benevolent as compared to hostile sexism is more normative and socially accepted (Glick & Fiske, 2001b; 2001c) which may explain that children display higher endorsement of benevolent as compared to hostile sexist beliefs.

Against the hypothesis, no age differences were found. Literature on stereotype flexibility suggests that stereotype beliefs peak in their rigidity around the age of 5 to 6, and two years later, at the age of 7 to 8, drastically increase in flexibility (Trautner et al., 2005). Therefore, for the present study with 7-10-year-olds, endorsement of stereotype belief was expected to decrease with age. While developmental changes were not found, results are rather in line with predictions for older age groups, with low levels of hostile compared to benevolent sexism. It would be an interesting question for future research whether the predicted changes can be observed in a sample of younger children, ideally from the age of 5.

Further, in line with prior hypothesis, girls endorsed less hostile, but not benevolent sexist beliefs than boys. This is in line with the literature on ambivalent sexism in adulthood, which finds that benevolent as compared to hostile sexism is shared by many women and therefore takes a key role in maintaining gender status relations (Glick & Fiske 2001b; 2001c). As the correlation between the two items for hostile sexism was low, gender differences for each item were analyzed separately. The gender difference in personal beliefs was found to hold for only one of the two items: girls rejected the stereotype more for the item displaying exclusion in an academic setting, while for the items displaying exclusion in an outdoor context, no gender difference was found. This finding may be due to the fact that today in many developed countries, despite subject-specific differences, girls have better academic outcomes than boys (Hartley & Sutton, 2013; see also EACEA/ Eurydice, 2010). If girls know that they perform better in the academic context, this may give them the room to reject the stereotype, which does not apply for the item on exclusion from an outdoor activity.

Overall, the results regarding endorsement of ambivalent sexist beliefs are in line with

studies applying the ISA in adolescent samples and found endorsement of benevolent sexism to be stronger than hostile sexism (Cavadas, 2018; De Lemus, 2008; 2010). Both benevolent and hostile beliefs were found to decrease with age in these studies (De Lemus et al., 2008; 2010). Contrary to the findings of the present study, boys have been found to endorse higher levels of both benevolent and hostile sexism in studies with adolescents (Cavadas, 2018; de Lemus et al., 2008). Further investigation of the transition of stereotype endorsement from early childhood until adolescence is needed to test whether there the gender differences in answering behavior emerge with age, or whether the differences in findings are due to characteristics of the measures applied.

As predicted, the future career aspirations of the children were highly affected by gender, with girls showing more interest in professions higher on warmth and boys showing more interest in professions higher on competence. While both hostile and benevolent sexism were expected to predict higher levels of stereotype congruence in future career aspirations (higher interest of professions higher on warmth for girls and higher interest of professions higher on competence for boys), only stereotype knowledge of the dimension of protective paternalism predicts children's future career aspirations, and only so for girls. The more girls think that girls are protected by boys, the more they would like to do professions that are higher on warmth than on competence in the future and thus confirm gender stereotypes. The results of the present study differ from those of Montañés and colleagues (2012) who found that both hostile and benevolent sexism influenced traditional future goals of adolescent girls.

It is an interesting finding that knowledge, but not personal beliefs of protective paternalism predict future career aspiration. Not the personal opinion that girls should be protected by boys, but rather the knowledge that this idea is shared by the society and can be observed in everyday life influences the interest in professions. Boys future career aspirations were found to be independent from stereotype knowledge and beliefs. This may be interpreted as an indication that boys compared to girls are more independent in their behavioral choices from their knowledge of ideas about gender roles that are shared by society, such as that girls are protected by boys.

These results are particularly interesting when considered in the context of status differences between professions: according to the SCM (Fiske et al., 2002), the categorization along the warmth and competence dimensions is interrelated with status and competition, with status predicting high competence and competition predicting low warmth. Previous research suggests that young children are already aware of status differences of jobs and were found to rate masculine jobs as higher on status (Bigler et al., 2001). The present study

confirms that girls are more likely to choose jobs higher on warmth than competence, despite lower status of these jobs, and even more so if they show high knowledge of the stereotype of protective paternalism.

Limitations and implications for future research

As discussed above, including more items to the CASM could increase chances to develop a factor structure with all four expected factors and higher reliabilities overall, but especially for the hostile dimension. However, it has been a major challenge to conceptualize the ambivalent sexism dimensions in an appropriate way for children, and the present study gives important insights that may help the further development of the scale. Finalizing the scale would clearly be the next big step for future research.

Moreover, as discussed above, future research should aim to include younger children from the age of 5. Moreover, it would be interesting to apply the first part of the measure with even younger children, possibly from age 3, in order to investigate from what age the children make a connection between the situation and gender. The most complete analysis would be in assessing hostile and benevolent sexist beliefs from early childhood until adolescence.

The present study has given important insights into the development of ambivalent sexism in childhood. For an even deeper understanding, it would be helpful to add a qualitative part to the study. For each scenario, after asking whether a certain character is rather a boy or a girl or can be either a boy or a girl, the participant could be asked 'And why do you think so?'. It may enable even more nuanced insights on how children perceive gender relations, because it would allow to analyze why the children answer the way they answer – is it stereotype endorsement, ingroup favoritism, egalitarian attitudes, or are they not able to provide a meaningful reasoning? Apart from qualitative analysis, children's answers could be categorized to these four categories and the prevalence of the categories could be analyzed. A comparable methodology has been applied in a number of studies by Melanie Killen (see e.g. Killen & Stangor, 2001).

Moreover, for future research, it would be interesting to investigate the relationship between the developmental course of attitudes towards both boys and girls. Therefore, following the example of Glick and Fiske (1999) who developed the AMI as a measure of ambivalent attitudes towards men, the aim could be to develop a childhood version of such measure that follows the same answer format of the CASM. This would allow for an even more complete analysis of childhood gender relations.

General discussion

Two studies were conducted in order to investigate the prevalence of hostile and benevolent sexism in childhood. In the systematic literature review, literature of the past 9 years of research on gender knowledge in childhood was reanalyzed through the framework of AST. The results mainly give insights into the prevalence of competitive and complementary gender differentiation, suggesting that children are at least aware of both hostile and benevolent stereotypes. In the second study, a new measure of ambivalent sexism in childhood was developed and applied in a sample of 7-10-year-old Portuguese children. The results give new insights into the prevalence of protective paternalism and heterosexual intimacy and suggest that children are not only aware of benevolent sexist stereotypes, but also endorse these beliefs to a high extent. While scores for hostile sexism were rather low, scores on the dimensions of benevolent sexism were very high.

Theoretical implications

Literature on the development of gender stereotypes suggests that stereotypes become more flexible with age (Signorella et al., 1993, Trautner et al., 2005, Ruble et al., 2006). However, this doesn't seem to hold for the benevolent stereotypes, since levels of benevolent sexism were high and didn't decrease with age. Thus, there are differences in the developmental course of different types of stereotypes. This finding in itself is an important theoretical contribution. Carol Lynn Martin has argued that 'most measures of gender stereotyping are too simplistic and need to be further refined to capture developmental changes in how they are used' (Martin, 1999, p. 60), calling for new measures to assess stereotypes in a more complex manner. The present study takes a step in this direction.

To my knowledge, the present studies are the first investigation of ambivalent sexism in childhood. Glick & Hilt (2000) have put forth hypothesis about the development of ambivalent sexism in a theoretical book chapter. The results of the present studies however speak against their predictions: it does not seem to be the case that childhood gender relations are purely hostile, and benevolence only gains relevance with adolescence. Children rather seem to be aware of benevolent stereotypes from an early age and their beliefs regarding these stereotypes are strong and prescriptive.

Rather than confirming Glick & Hilt's (2000) hypothesis, the results indicate that major premises of AST about gender relations in adulthood already hold in childhood. From the age of 7, benevolent sexism was found to be highly prevalent, remaining stable with age, while scores on the hostile dimensions were very low. Moreover, while girls scored lower on endorsement of hostile sexism, no gender difference was found for benevolent sexism. This is

in line with AST which predicts that benevolent stereotypes are especially relevant in holding gender relations in place, because they are socially accepted and shared by many women (Glick & Fiske, 2001b; 2001c). Instead of coming up only with adolescence, benevolent sexist stereotypes seem to be acquired early in childhood. They don't seem to follow the decreasing developmental course of hostile beliefs but remain stable at least until adolescence.

Glick & Fiske (2011) argue that gender relations are a special case of intergroup relations due to the unique interdependence between men and women. It seems like this observation is already relevant during childhood and in a similar vein, the developmental course of gender relations is a special case. From a very young age, there is a tendency towards more positive evaluation of girls compared to boys, on both explicit and implicit measures (Cvencek et al., 2011; Dunham et al., 2016). This tendency increases drastically until adulthood, when both male and female participants show preference for women (Dunham et al., 2016). The results obtained in the present studies further show that gender relations in childhood are not simply characterized by ingroup-favoritism: complementary ideas about boys and girls prevail from early childhood, enforcing social roles while evaluation of boys and girls doesn't follow a simple good/ bad dichotomy, but is rather domain specific.

Implications for education and intervention

Taken together, if ambivalent stereotypes between males and females prevent social change towards more gender equality (Glick & Fiske, 1996; 2000b, 2000c) and benevolent sexism is a relevant factor from childhood, it needs to be taken into consideration for educational and interventional purposes. In order to pave the way for a more gender egalitarian society, work with both young girls and boys is required, acknowledging the societal demands for either gender in today's society. Boys and girls should be encouraged to learn the skills they easily miss out on in their gender specific socialization process. For boys, this could mean to be taught to show emotions openly and to open up more easily in social relations. For girls, this could be to learn assertiveness, confidence in the own strength and technical skills. Such approach would also hold the potential to break the strong social norms attached with being a boy or girl in childhood and later on in life, since the children are given the chance to observe counter-stereotypic behavior in their peers. As a consequence, the strong ideas that are attached with being a boy or girl in today's society, such as that girls need to be protected by boys, may vanish with time, giving room for both boys and girls to resist gender norms and develop interests and agency across domains.

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Appendix A

Table 2.1.

List of articles included in the qualitative analysis of the systematic literature review. Reference, sample, measure(s) of gender knowledge, summary of results and categorization along Ambivalent Sexism Theory dimensions.

Study	Sample	Measure(s) of gender knowledge	Results	Dimension of ambivalent sexism
Hartley, B. L., & Sutton, R. M. (2013). A stereotype threat account of boys' academic underachievement. *Child development*, *84*(5), 1716-1733. Study 1	238 children in UK age: 4-10 years	academic gender stereotypes regarding good conduct and achievement	• girls endorsed girls' academic superiority from 4 years old • boys in foundation stage (4–5), year 1, and year 2 were equally split between believing boys or girls were superior • With age, boys increasingly endorse the stereotype that girls are academically superior, particularly around age 7–8 years	Competitive gender differentiation
Master, A., Cheryan, S., Moscatelli, A., & Meltzoff, A. N. (2017). Programming experience promotes higher STEM motivation among first-grade girls. *Journal of experimental child psychology*, *160*, 92-106.	96 children in the U.S. age: 6 years	STEM gender stereotypes: who is better at robots and programming, science, math	• 6-year-olds were significantly more likely than chance to report stereotypes that boys were better than girls at robots and programming • no significant effect for science and math • boys were significantly more likely than girls to say that boys were better than girls at science, math and programming	Competitive gender differentiation

Neuburger, S., Ruthsatz, V., Jansen, P., & Quaiser-Pohl, C. (2015). Can girls think spatially? Influence of implicit gender stereotype activation and rotational axis on fourth graders' mental-rotation performance. *Learning and Individual Differences*, *37*, 169-175.	272 children in Germany age: 9-11 years (M=9,81)	gender stereotypes regarding solving mental-rotation tasks/ imagining something spatially/ mathematics/ art	• both boys and girls (strongly) agree that boys are better at solving mental-rotation tasks • boys but not girls slightly believe that boys are better at spatial imagining and math • both boys and girls believe that their own gender is better at art	Competitive gender differentiation
Vander Heyden, K. M., van Atteveldt, N. M., Huizinga, M., & Jolles, J. (2016). Implicit and explicit gender beliefs in spatial ability: Stronger stereotyping in boys than girls. *Frontiers in psychology*, *7*, 1114.	237 children in Netherlands age: 7-13 years	explicit gender stereotypes about spatial ability	• both boys and girls considered the spatial activities more appropriate for boys than girls, boys had stronger associations between spatial and boy than the girls • both boys and girls considered boys more skilled in spatial activities than girls, boys had stronger associations between boy and spatial than girls	Competitive gender differentiation
		implicit gender stereotypes about spatial ability (Child IAT)	• boys strongly associated spatial activities and abilities with boys, girls associated spatial abilities as strongly with boys as with girls • throughout measures no age effect	Competitive gender differentiation
Moè, A. (2018). Mental rotation and mathematics: Gender-stereotyped beliefs	123 children in Italy Grade 2: age	gender stereotypes regarding mental rotation, math, language	• in grade 2, boys self-rated themselves more able than girls in mathematics and girls in first language,	Competitive gender differentiation

and relationships in primary school children. *Learning and Individual Differences*, *61*, 172-180.	M=7.83 Grade 4: age M=9.82		whilst in mental rotation, both sexes self-rated more able than the opposite sex. ● in grade 4, girls don't rate themselves as more able in mental rotation anymore	
Passolunghi, M. C., Ferreira, T. I. R., & Tomasetto, C. (2014). Math–gender stereotypes and math-related beliefs in childhood and early adolescence. *Learning and Individual Differences*, *34*, 70-76.	relevant age groups: 166 children in Italy Grade 3: age M=7.36 Grade 5: age M=9.43	explicit stereotype regarding math ability	● boys in the 3rd and 5th grades and girls in the 3rd grade indicated that their own gender was the best at math ● 5th grade girls stated that males and females are equally good in math	Competitive gender differentiation
		Child IAT: associations between boy/ girl and math/ language & arts	● implicit math gender stereotype was found for girls across grades, but not for boys	Competitive gender differentiation
Galdi, S., Cadinu, M., & Tomasetto, C. (2014). The roots of stereotype threat: When automatic associations disrupt girls' math performance. *Child development*, *85*(1), 250-263.	226 children in Italy Grade 1	explicit stereotype regarding math ability	● 57% of boys and 57% of girls favored their own gender ● 12% of boys and 21% of girls responded that the boy and the girl were the same ● 22% of girls identified the boy as being better at math, whereas 31% of boys believed that the outstanding math student was the girl	Competitive gender differentiation
Galdi, S., Mirisola, A., & Tomasetto, C. (2017). On	68 children in Italy	Child IAT: associations between boy/girl and	● IAT scores were different from zero for girls, but not for boys (higher	Competitive gender

the relations between parents' and children's implicit and explicit academic gender stereotypes. *Psicologia sociale*, *12*(2), 215-238.	Grade 1 (age M=6.41)	math/language explicit stereotypes regarding math/ language ability	score = stronger stereotype) • children did not manifest beliefs consistent with traditional academic gender stereotypes • no difference between boys and girls	differentiation Competitive gender differentiation
Del Río, M. F., & Strasser, K. (2013). Preschool children's beliefs about gender differences in academic skills. *Sex roles*, *68*(3-4), 231-238.	81 children in Chile age: 5-6 years	gender stereotypes regarding maths and language what are boys/ girls better at	• stereotypic expectations from age 5 • expectations about boys:do equally well in math and language, find them equally hard • expectations about girls: do better in language than math tasks, find math harder than language • no gender differences in answers, except question "which one does the girl find harder?" - more girls than boys chose math over language	Competitive gender differentiation
Kurtz-Costes, B., Copping, K. E., Rowley, S. J., & Kinlaw, C. R. (2014). Gender and age differences in awareness and endorsement of gender stereotypes about academic abilities. *European Journal of Psychology of education*, *29*(4), 603-618.	463 children in the U.S. Grade 4: 187 participants Grade 6: 141 participants	gender stereotypes regarding mathematics, science, verbal skills	• Fourth and sixth graders had a stronger tendency than eighth graders to favor their own gender group rather than report traditional stereotypes. • On average, girls favored girls over boys in all three domains. • Fourth grade boys favored boys in all three domains; middle school boys reported traditional verbal stereo-	Competitive gender differentiation

			types and were on average egalitar-ian in beliefs about math and science.	
Martinot, D., Bagès, C., & Désert, M. (2012). French children's awareness of gender stereotypes about mathematics and reading: When girls improve their reputation in math. *Sex Roles*, *66*(3-4), 210-219.	398 children in France Grade 5, age M=10.7	gender stereotypes for children/ adults regarding math and reading	• The reading- ability gender stereo-type did not depend on the target's age and was in favor of females • Regarding math- ability stereotype for children, girls rather answered in favor of girls while boys answered equally in favor of boys or girls • Math- ability stereotypes for adults were in favor of men	Competitive gender differentiation
Cvencek, D., Meltzoff, A. N., & Kapur, M. (2014). Cognitive consistency and math–gender stereotypes in Singaporean children. *Journal of Experimental Child Psychology*, *117*, 73-91.	172 children in Singapore Grade 1; 3; 5	math- gender stereotype IAT: tests association between boy/ girl and math/ reading	• IAT: both boys and girls associated math more with boys and boys asso-ciated math more with themselves than girls. This effect was found from Grade 3 and increased in Grade 5.	Competitive gender differentiation
Cvencek, D., Kapur, M., & Meltzoff, A. N. (2015). Math achievement, stereotypes, and math self-concepts among elementary-school students in Singapore. *Learning and Instruction*, *39*, 1-10.	299 children in Singapore Grade 1: age M=7.37 Grade 3: age M=9.38 Grade 5: age M=11.38	math- gender stereotype IAT: tests association between boy/ girl and math/ reading	boys associated math with own gender significantly more than did girls	Competitive gender differentiation

Cvencek, D., Meltzoff, A. N., & Greenwald, A. G. (2011). Math–gender stereotypes in elementary school children. *Child development*, *82*(3), 766-779.	247 children in the U.S. Grade 1-5	math- gender stereotype IAT: tests association between boy/ girl and math/ reading	• boys and girls indicated stronger association of math with boys than with girls • math–gender stereotypes were also robustly evident throughout grades	Competitive gender differentiation
Steffens, M. C., Jelenec, P., & Noack, P. (2010). On the leaky math pipeline: Comparing implicit math-gender stereotypes and math withdrawal in female and male children and adolescents. *Journal of Educational Psychology*, *102*(4), 947.	relevant age group: Grade 4: 59 children in Germany age M=9.4	math- gender stereotype IAT: tests association between boy/ girl and math/ reading explicit measure of math and German gender stereotype (giftedness and typicality)	• no significant stereotypic associations in boys of any age group • girls in grade 4 and 9, but not in grade 7 show significant implicit stereotyping • in contrast to implicit stereotypies, girls and boys in all grades held stereotypes • no effect of gender or age	Competitive gender differentiation Competitive gender differentiation
Hilliard, L. J., & Liben, L. S. (2010). Differing levels of gender salience in preschool classrooms: Effects on children's gender attitudes and intergroup bias. *Child development*, *81*(6), 1787-1798.	57 children in the U.S. age: 3-5 years (M=4.7)	gender attitude: POAT-AM (Bigler &Liben, 2002) 66 occupations and activities, including 22 culturally masculine (e.g., use tools, be a firefighter), 20 culturally feminine (e.g., play with dolls, be a dancer), and 24 neutral (e.g., fly a kite, be a writer) items -	• reported result - number of 'both boys and girls' responses out of 42 masculine/ feminine items: pretest condition 1: M (SD) = 14.46 (7.14) condition 2: M(SD) = 15.37 (6.99) • no effect of age found	Competitive & complementary gender differentiation

		children were asked for each item if men/boys, women/girls, or both men and women ''should'' perform it		
Meyer, M., & Gelman, S. A. (2016). Gender essentialism in children and parents: Implications for the development of gender stereotyping and gender-typed preferences. *Sex Roles*, *75*(9-10), 409-421.	80 children in the U.S. age: 5-7 years (M=6.4)	POAT-AM	• relatively stable across age • higher level of stereotyping in girls (M= .56- .61) compared to boys (M=.47 - .57), range 0-1	Competitive & complementary gender differentiation
Weisgram, E. S. (2016). The cognitive construction of gender stereotypes: Evidence for the dual pathways model of gender differentiation. *Sex Roles*, *75*(7-8), 301-313. Study 2	57 children in the U.S. age: 3-5 years	POAT-AM with 6 masculine, 6 feminine and 2 gender neutral activities	n=30, gave two or fewer both responses and n = 27 gave three or more both responses	Competitive & complementary gender differentiation
Patterson, M. M. (2012). Self-perceived gender typicality, gender-typed attributes, and gender stereotype endorsement in	100 children in the U.S. age: 6-12 years	COAT-AM activity and occupation scales: typically masculine/ feminine/ neutral items - children	• no gender difference in stereotype endorsement boys: M=0.42 (SD=0.19) girls: M=0.45 (SD=0.22) • no age effect	Competitive & complementary gender differentiation

elementary-school-aged children. *Sex roles*, *67*(7-8), 422-434.		were asked for each item if men ∕ boys, women ∕ girls, or both men and women ''should'' perform it; scores range from 0 to 1, with higher scores indicating more stereotyped attitudes		
Sumontha, J., Farr, R. H., & Patterson, C. J. (2017). Children's gender development: Associations with parental sexual orientation, division of labor, and gender ideology. *Psychology of Sexual Orientation and Gender Diversity*, *4*(4), 438.	86 children in the U.S. longitudinal study: age: 1-5 years and 5 years later homosexual/ heterosexual parents	COAT-AM 25 occupations, 25 activities, and 25 traits regarding the degree to which they were appropriate for women/girls or men/boys; score represent the proportion of occupations, activities, and traits that children believed "both men and women" or "neither men nor women" could do or have - higher scores indicated greater flexibility of gender attitudes	- daughters with lesbian mothers reported significantly more flexible gender attitudes (M=.82) than did daughters of gay fathers (M=.67) or heterosexual parents (M=.57) - daughters of gay fathers reported significantly more flexible gender attitudes than daughters of heterosexual parents - no significant differences in gender attitudes were found among sons as a function of parents' sexual orientation (M=.7 to .75)	Competitive & complementary gender differentiation
Banse, R., Gawronski, B., Rebetez, C., Gutt, H., & Bruce Morton, J. (2010).	66 children in Belgium age: 5-11	gender stereotype flexibility: pictures of stereotypical	stereotype flexibility showed a strong and significant increase across the three age groups	Competitive & complementary gender

The development of spontaneous gender stereotyping in childhood: Relations to stereotype knowledge and stereotype flexibility. *Developmental Science, 13*(2), 298-306.	years	items like iron/ hammer and stereotypical toys - questions: Who can use this?/ Who uses this more often?	• for common objects, stereotype flexibility increased from 33.8% in 5-year-olds to 87.8% in 11- year-olds • same pattern emerged for toys, for which stereotype flexibility increased from 14.5% in 5-year-olds to 77.83% in 11-year-olds	differentiation
Baker, E. R., Tisak, M. S., & Tisak, J. (2016). What can boys and girls do? Preschoolers' perspectives regarding gender roles across domains of behavior. *Social Psychology of Education, 19*(1), 23-39.	99 children in the U.S. age: 3-6.5 (M=4.6)	gender stereotypes regarding occupations	• females showed greater gender-congruent beliefs than did males: expressed that only girls may be teachers, only boys may be police officers, and that only girls may be nurses. • males reported equal gender prescriptions for every occupation	competitive gender differentiation
		activities	• both females and males felt that only boys could use tools and fix cars • females (but not males) felt that only girls could shop for clothes • cook dinner: 69 % of males, 51 % of females indicated that both boys and girls are capable	complementary gender differentiation
		aggressive behaviors	• females indicated for two items (i.e., taking, pulling hair) that boys exhibit these behaviors more so than girls, while males showed no gender- differentiated expectations • Males and females reported that both	complementary gender differentiation

		prosocial behaviors question for each item: 'Who can do/ be …?', answers: a boy, a girl, both a girl and a boy, 5 items per domain	boys and girls could behave in all of the prosocial ways ● Male participants answered more egalitarian than female participants.	complementary gender differentiation
Hine, B. A. (2017). Identifying the male prosocial niche: the gender-typing of prosocial behaviour across childhood and adolescence. *European Journal of Developmental Psychology*, *14*(2), 206-220.	283 children in the U.K. in relevant age group with age M=11.66	gender stereotypes regarding prosocial behavior participants were presented with 24 prosocial items to rate on a masculine/feminine 5-point scale	● the majority of the items were rated as feminine ● items not obviously aligned with either gender role were rated as feminine ● items rated as masculine: humorous, willing to play, provides physical assistance, good sport, stands up for others, keeps confidences, and confronts others when wrong	complementary gender differentiation
Granié, M. A., & Papafava, E. (2011). Gender stereotypes associated with vehicle driving among French preadolescents and adolescents. *Transportation Research Part F: Traffic Psychology and Behaviour*, *14*(5), 341-353.	599 children in France age: 10-16 years relevant age groups: 10-11 years; 12 years	traits associated with male and female drivers	● women were perceived as unskilled drivers with high accident rates while they were also seen as driving safer, paying more attention, having less accidents and complying more with traffic rules ● men were perceived as drivers who are skilled while being careless and committing offenses	Dominative paternalism
Wilbourn, Kee (2010): Henry the Nurse is a Doctor	75 children in the U.S.	association of occupations with gender	● children's gender role stereotypes for females are less constrained than for	Competitive gender

Too: Implicitly Examining Children's Gender Stereotypes for Male and Female Occupational Roles	age: 8-9 years	through sentence generation task and cued-recall test	males, include both masculine and feminine occupations, and mirror current sociological occupational trends • children were more likely to generate recall errors that were congruent with their existing gender role stereotypes	differentiation
Boseovski, J. J., Hughes, C., & Miller, S. E. (2016). Expertise in unexpected places: Children's acceptance of information from gender counter-stereotypical experts. *Journal of experimental child psychology*, *141*, 161-176.	96 children in the U.S. age: 4-8 years	children heard conflicting information from stereotypical/ counterstereotypical experts and were asked which information is correct/ how they would like to learn from/ who they like experts in: football/ construction; sewing/ ballet	• overall, participants selected the gender counter-stereotypical expert as correct • 4- to 5-year-olds reported a preference to learn from same-gender participants in the future irrespective of expertise • 6- to 8-year-olds reported wanting to learn from counter-stereotypical experts • boys showed relatively greater acceptance of information from a male counter-stereotypical expert than from a female counter-stereotypical expert • although participants reported greater liking of same-gender informants, liking evaluations were largely positive irrespective of gender norm deviations	Competitive gender differentiation
Halim, M. L. D., Ruble, D. N., Tamis-LeMonda, C. S.,	246 children in the U.S.	general liking: How do you feel about boys/	• attitudes toward the own-gender group were on average very positive,	General hostility

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Shrout, P. E., & Amodio, D. M. (2017). Gender attitudes in early childhood: Behavioral consequences and cognitive antecedents. *Child development, 88*(3), 882-899.	two waves of assessment age: 1st wave: 4 years; 2nd wave: 5 years	girls? intergroup behavior: resource allocation, prefered seating distance	while attitudes toward the other gender were on average somewhat negative • for the coin allocation task, on average, children allotted more coins to their own than to the other gender group • for the seating distance task, children on average did not show a significant difference in how closely they sat from an own- and other-gender child	General hostility
Cvencek, D., Greenwald, A. G., & Meltzoff, A. N. (2011). Measuring implicit attitudes of 4-year-olds: The preschool implicit association test. *Journal of Experimental Child Psychology, 109*(2), 187-200.	75 children in the U.S. age: 4 years	Preschool IAT: tested association between girl/ boy and good/bad explicit measure of liking for girls/ boys	• overall stronger association of girls=good • this effect is stronger for girls • overall more liking of girls • this effect is stronger for girls	General hostility
Zosuls, K. M., et al. (2011). 'It's not that we hate you': Understanding children's gender attitudes and expectancies about peer relationships. *British Journal of Developmental Psychology, 29*, 288-304.	98 children in the U.S. age: 9-11 years	Global liking of own-gender and other-gender peers	• both boys and girls liked own-gender peers more than other gender peers	General hostility

Braun, S. S., & Davidson, A. J. (2017). Gender (non) conformity in middle childhood: a mixed methods approach to understanding gender-typed behavior, friendship, and peer preference. *Sex roles*, *77*(1-2), 16-29	54 children in England age: 9-10 years	4 hypothetical scenarios describing potential new classmates: a gender conforming boy, a gender conforming girl, a gender nonconforming boy, and a gender nonconforming girl question: participants indicated whom they were the 'most excited' and 'least excited' to have in their class + reasoning gender conforming regarding: activities, interests, character traits, physical characteristics	• the gender nonconforming boy was the most at risk for peer rejection • children preferred the gender conforming boy and gender nonconforming girl — most often citing masculine activities as reasons why they liked the potential classmate, and feminine activities as reasons why they did not like the potential classmate • girls valued gender nonconformity in other girls • findings indicate that feminine activities were not valued by boys, whereas both boys and girls valued masculine activities • findings also indicate that it was more socially acceptable for girls to cross the gender boundary into the male sphere than for boys to cross into the female sphere	Competitive gender differentiation
Sinno, S. M., Schuette, C. T., & Hellriegel, C. (2017). The Impact of Family and Community on Children's Understanding of Parental Role Negotiation. *Journal of Family Issues*, *38*(4), 435-456.	272 children in the U.S. age: 7/ 10 years	judgement and justification of parental role negotiation in a hypothetical family One scenario: stay-at-home mom, who wants to get a job but the dad wants her to stay at home. Other scenario:	• Child's age was only influential in terms of social reasoning: children in early childhood relied on social conventional and stereo- typed reasoning, while children in middle childhood used more personal choice reasoning when justifying parental opposition to gender role changes.	Competitive gender differentiation

		dad who is employed full-time but wants to switch to a stay-at-home dad, but the mom wants him to continue to work.	• Children were more likely to use stereotyped thinking about caretaking fathers compared with employed mothers and thought it was more acceptable for a mother to oppose his staying home than for a father to oppose her employment. However, most children thought that it was not fair for a mother to say that dads cannot take good care of babies.	
Park, Y., Lee-Kim, J., Killen, M., Park, K., & Kim, J. (2012). Korean children's evaluation of parental restrictions regarding gender-stereotypic peer activities. *Social Development*, *21*(3), 577-591.	128 children in South Korea Grade 3: age M=9.95 Grade 6: age M=12.83	evaluation of gender-inconsistent participation and justification, 'Is it okay or not okay for the girl to play soccer?'/ 'Is it okay or not for the boy to do ballet?'	• gender-inconsistent participation was evaluated less positively than gender-consistent participation • third graders were less supportive of gender-inconsistent activities than were sixth graders for soccer and ballet • girls were more likely to support gender-inconsistent activities than boys	Competitive gender differentiation
Conry-Murray, C., & Turiel, E. (2012). Jimmy's baby doll and Jenny's truck: Young children's reasoning about gender norms. *Child Development*, *83*(1), 146-158.	72 children in the U.S. age: 4-8 years	judgements of non-normative preferences and justification e.g. 'If the boy Joe loves babysitting, even more than the girl Sara, then who should go to the babysitting class?	• a larger proportion of younger than older children treated gender norms as fixed	Competitive gender differentiation

Conry-Murray, C. (2013). Children's reasoning about gender-atypical preferences in different settings. *Journal of Experimental Child Psychology, 115* (1). 210-217.	56 children in the U.S. age: 5-9 years	stories in which a child has the choice between a gender norm consistent or inconsistent object and preference for one of them, question whether child should change behavior + justification; two settings: familiar setting/ norm reversed country stories: preference of a pink bike over a blue bike; a book about making necklaces over a book about baseball; a soldier costume over a ballet costume; a truck over a doll	• across both ages, children showed that they knew the gender norm about who usually uses each item 96% of the time. • across both settings and both ages, participants were strongly influenced by the preferences of the characters in the assessments, endorsing the atypical preferences in a majority of cases • still, judgments endorsing preferences were significantly more frequent in reversed norm setting (93%) than in the setting with familiar gender norms (66%) • a boy wishing to engage in a feminine activity was judged as less acceptable than a girl wishing to engage in a masculine activity	Competitive gender differentiation
Mulvey, K. L., & Irvin, M. J. (2018). Judgments and reasoning about exclusion from counter-stereotypic STEM career choices in early childhood. *Early Childhood Research Quarterly, 44*, 220-230.	141 children in the U.S. Age: 3-8 years	judgements of acceptability of counter-stereotypic STEM careers; judgements of exclusion from such careers	• overall, children judged counter-stereotypic STEM careers as acceptable, and exclusion as not acceptable • younger children judged them as less acceptable than older children	Competitive gender differentiation
Rizzo, M. T., & Killen, M. (2018). Theory of mind is	67 children in the U.S.	resource allocation to boys and girls who	• children held stereotypic expecta-	Competitive gender

related to children's resource allocations in gender stereotypic contexts. *Developmental psychology*, *54*(3), 510.	age: 4-6 years	complete a task in stereotypic or counter-stereotypic context	tions regarding doll- and truck-making abilities, and these expectations predicted the degree of bias in their allocations of resources to the characters ● with increasing Theory of Mind competence, children allocated resources based on merit rather than based on stereotypes	differentiation
Mulvey, K. L., Rizzo, M. T., & Killen, M. (2016). Challenging gender stereotypes: Theory of mind and peer group dynamics. *Developmental science*, *19*(6), 999-1010.	61 children in the U.S. age: 3-6 years	Challenging Gender Stereotypes task + justifications story in which a boy/ girl is considering to challenge gender norms within a peer group (propose to play with gender atypical toys) question: how okay or not okay do you think that is? Gender Association Task stereotypic toys used in the stories question: Who should play with X? girl, boy or both	● participants with false belief Theory of Mind rated challenging the peer group more positively ● reveal the importance of social- cognitive competencies for recognizing the legitimacy of challenging stereotypes ● 52% of 3- to 4-year-olds and 48% of 5- to 6–year- olds showed high stereotypic attitudes - no differences for gender associations by age	Competitive gender differentiation Competitive & complementary gender differentiation
Kostas, M. (2018). Snow White in Hellenic primary classrooms: children's	120 children in Greece age: 9-11	semi- structured group interviews: investigation how children make sense	● most boys, in particular, had identified femininity with weakness ● highly polarised binaries	Complementary gender differentiation

responses to non-traditional gender discourses. *Gender and Education*, *30*(4), 530-548.	years	of and negotiate non-traditional gender discourses promoted through the feminist version of the fairytale of Snow White	(strong/weak, violent/submissive, and adventurous/ unadventurous, around which masculinity and femininity are traditionally constructed) emerged when boys were asked to retell the tale, replacing Snow White with a male protagonist ● children almost unanimously believed that men do not cry, for they had identified masculinity with imperviousness ● most children reproduced the normative gender discourses of traditional fairy tales, in which a prince fights against evil powers in order to save himself or his beloved princess ● when asked to develop the story further and give an alternative ending, most girls drew upon discourse of marriage and described a wedding between Snow White and her prince/dream man: emphasis placed on the importance of romantic heterosexuality	Heterosexuxal intimacy
Hamilton, P., & Roberts, B. (2017). 'Man-up, go and get an ice-pack.' Gendered stereotypes and binaries within the primary	20 children in North Wales Grade 5/6	unsystematic observations; discussion groups	● words used by the girls to describe the behaviour of the boys within the classroom: 'loud', 'naughty', 'silly', 'don't listen', 'cheeky' 'easily dis-	Competitive & complementary gender differentiation

classroom: a thing of the past?. *Education 3-13*, *45*(1), 122-134.			- tracted', 'can't sit still' and 'interruptive' - girl positioned boys as having an indifferent or rejecting attitude towards school and school work - boys generally identified girls as being school-engaged, using words such: 'confident', 'sensible', 'modest', 'quiet' and 'better listeners', - not all terms used by the boys to describe the behaviour of the girls were endearing: deficit labels positioned girls as 'controlling, nicey-nicey, perfectionists'.	
Oliveira, K. A. C. (2016). Children's implicit leadership theories in middle childhood: christian children's perceptions in the cavite province. *Journal of Research on Christian Education, 23*(3), 261-272.	28 children in Philippines, age M = 9.8	Children were asked to draw a picture of their favorite leader	- males, older children and non-catholic participants were more likely to choose male leaders - girls, catholics and young children were more likely to nominate female leaders	Competitive gender differentiation
Breneselovic, D. P. & Krnjaja, Z. (2016). Discourses on gender in early childhood education and care (ECEC) setting: equally discriminated	50 children in Serbia, age: 5	Mosaic method (qualitative analysis)	high levels of gender segregation and hostility towards the other gender were observed in children's play: girls were making poison for the boys; boys were protecting their castle from boys; girls told that the boys made traps so the girls would fall	General hostility, competitive gender differentiation

against. *Journal of Pedagogy, 7*(2), 51-77.			• into them • clear ideas about activities for boys and girls • boys need for demonstration of power is highly evident: girls would only be allowed as servants in their castle	
Paterson, K. (2014). "It's harder to catch a boy because they're tougher": using fairytales in the classroom to explore children's understandings of gender. *Alberta Journal of Educational Research, 60*(3), 474-490.	14 children in Canada, Age: 6-7	Observations in discussions of traditional and non-traditional fairytales	• conforming to gender norms was frequently controlled by social peer pressure • strong association between strength and being brave with males, expectancy that girls couldn't be brave or defend themselves, therefore need for male hero • importance of physical beauty for girls, in order to attract men ('to be pretty for the prince') • women's passive role in heterosexual relationship	Competitive and complementary gender differentiation, protective paternalism, heterosexual intimacy

Note. STEM = science, technology, engineering and maths. U.S. = United States. U. K. = United Kingdom.

Appendix B

Hostile Sexism

- Two children play a game together. One child suggests new rules for the game and the other child agrees. This child loses the next game and starts complaining to all friends and the teacher, saying that the rules of the game were not fair. *(2 questions)*

- Two children both want to play with a toy that is on the floor. One child takes the toy and runs away to play with it. The other child complains and lies to the teacher that the other child took the toy unfairly. *(2 questions)*

- In a school, the teacher of each class asks the children to vote for a classmate who will take the position of a delegate for the class. Every class decides for one delegate.

  Do you think that the class delegates will be for sure more boys/ probably more boys/ an equal amount of boys and girls/ probably more girls/ for sure more girls? *(1 question)*

- A group of children is playing that they are on a boat. One child is the captain of the boat and makes the important decisions. *(1 question)*

- A group of children is playing on the beach. One child wants to start a new game and proclaims new rules for the game that the other children should follow. *(1 question)*

- In this school, there has been a competition for smart children to solve difficult mathematical problems. In each class there is one winner.

  Do you think that the class winners will be for sure more boys/ probably more boys/ an equal amount of boys and girls/ probably more girls/ for sure more girls? *(1 question)*

- In the sports class, two teams are playing against each other. Each team has to decide for a team leader. One child says: 'Today I want to be the team leader!', but the other child replies: "No, you don't have a chance! I'll be the one scoring all the goals anyways". *(2 questions)*

- A group of children is building a treehouse. This child wants to help building it, but the other children say that it is too difficult for the child. *(1 question)*

- A group of children is playing that they are in a hospital. One of the children says: 'I don't want to play the patient every time. Today, I want to be the doctor!', but another child replies: 'No, you can't be the doctor. Of course that will be me!'. *(2 questions)*

- This is a family with two children. One of the children is helping outside, chopping wood with one of the parents. The other child want to help chopping wood too, but the parent says 'No, you should go inside and help cleaning the house'. *(2 questions)*

Protective Paternalism

- The teacher asks the children to move the tables in the classroom. One child helps another child to carry the table. *(2 questions)*

- There is a fire in the classroom. The two children need to leave the room. One of them lets the other child leave first. *(2 questions)*

- A bull is about to attack two children. There is no way for them to escape. One child protects the other child from being bitten. *(2 questions)*

- Two children decide to go apple picking together. One of them says: 'I'll climb up the tree and

pick the apples, and you better stay down, so you don't get hurt. You can collect the apples in a basket. ' *(2 questions)*

– Two children are walking along a street where many cars are passing. One child insists on walking on the side where the cars are passing, in order to protect the other child. *(2 questions)*

Complementary Gender Differentiation

– One child came to school and looked very sad and worried. Another child arrives to ask the child 'How are you feeling today? Is there something wrong?'. *(1 question)*

– Two children are walking home from school when they see another child scared of a dog. One of the children makes fun of the scared child, while the other comforts and hugs the child. *(2 questions)*

– In a friends' gathering, two families with children get together for dinner. One parent says 'You are so lucky that your child is always so polite and sensitive.'. *(1 question)*

– This is a family with two children. Today the aunt comes for a visit. While having dinner, the aunt says to one of the children: 'You look really beautiful today!'. *(1 question)*

– This is a family with two children. In the evening, the grandparents will come for a visit. One of the children spends the whole afternoon choosing the nicest clothes, in order to look very beautiful and impress the grandparents. *(1 question)*

Heterosexual Intimacy

– In this movie there is a character who searching for someone to be happy and marry with. *(2 questions)*

– In this movie there is a character who travels very far and goes through many adventures to win the heart of a person. *(2 questions)*

– In this movie, there is a character who sits everyday by the window, dreaming and waiting for a person who will do a big effort to win the heart and marry this character. *(2 questions)*

– In this movie, there is one character sitting on a bench in a garden when another character arrives with a bouquet of flowers and declares to be in love. *(2 questions)*

– In this movie, two characters are attending a ball. One of them is watching everyone dancing and is waiting to be asked to dance. The other one is searching the ball room for a person to ask for a dance. *(2 questions)*

Appendix C

H1: In this school, there has been a competition for smart children to solve difficult mathematical problems.
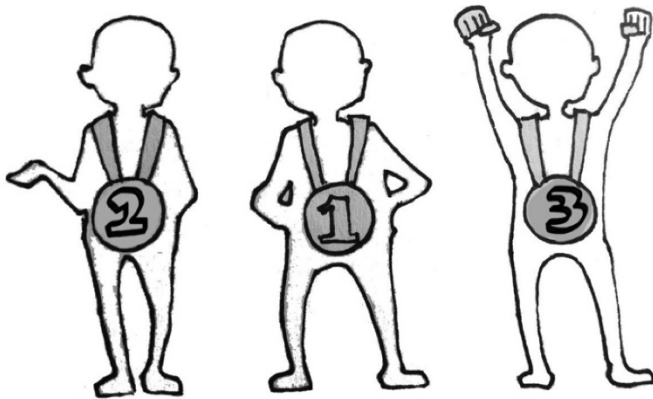
Part I. Who do you think is the winner of the competition?
Part II. Who would you like the winner to be?

H2: A group of children is building a wooden house. This child wants to help building it, but the other children say that it is too difficult for the child.

Part I. Do you think that the child who is excluded from building the treehouse is…
Part II. Who would you like the child who is excluded form building the treehouse to be?

H3: In this class, the teacher asks the children to vote for a classmate who will take the position of a delegate for the class. There is one child who doesn't get any vote.
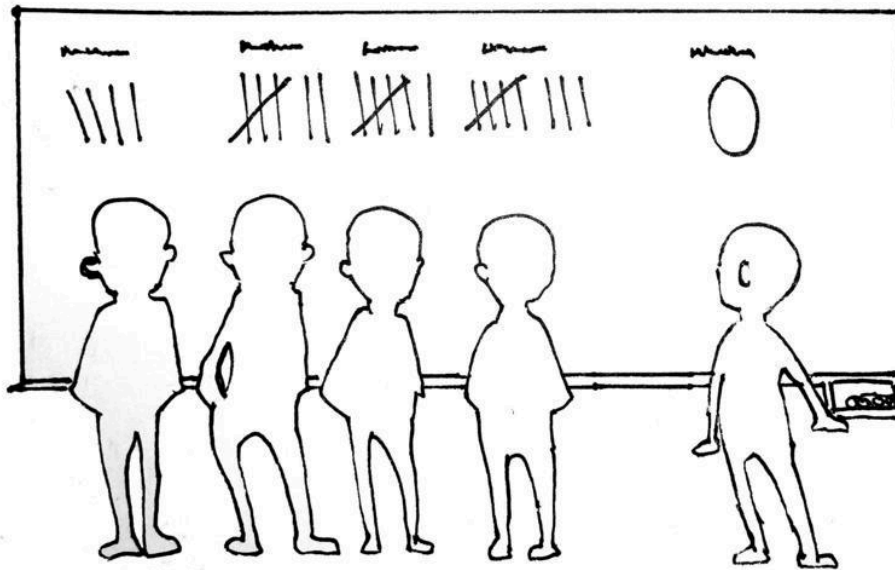
Part I. Do you the child who doesn't get any vote is…
Part II. Who would you like the child who doesn't get any vote to be?

H4: A group of children is playing that they are on a boat. One child is the captain of the boat and makes the important decisions.
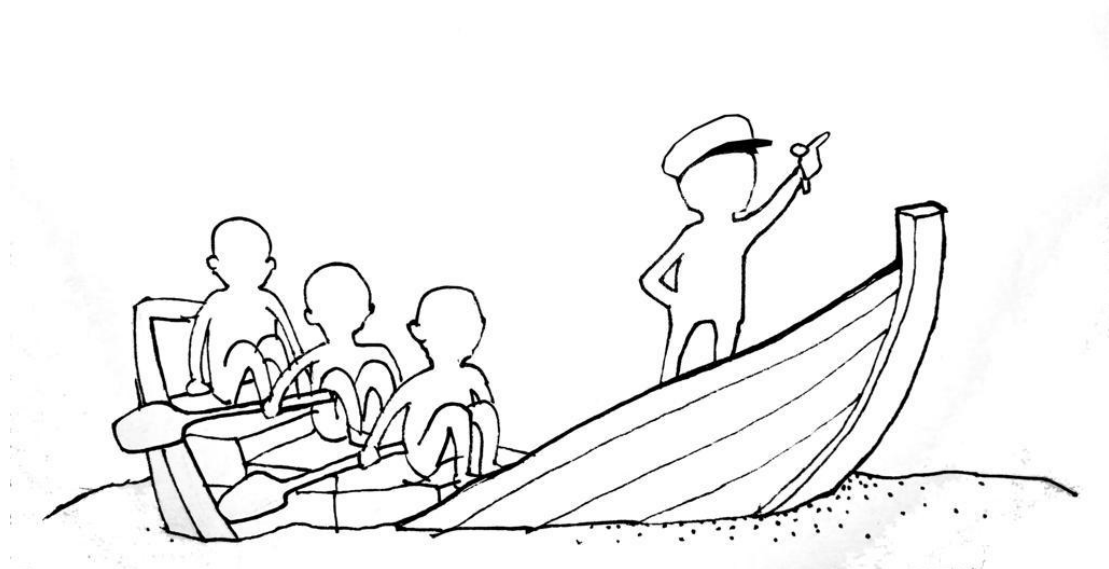
Part I. Do you think that the child who is the captain of the boat is…
Part II. Who would you like the child who is the captain of the boat to be?

PP1: A dog is about to attack two children. There is no way for them to escape. One child protects the other child from being bitten.
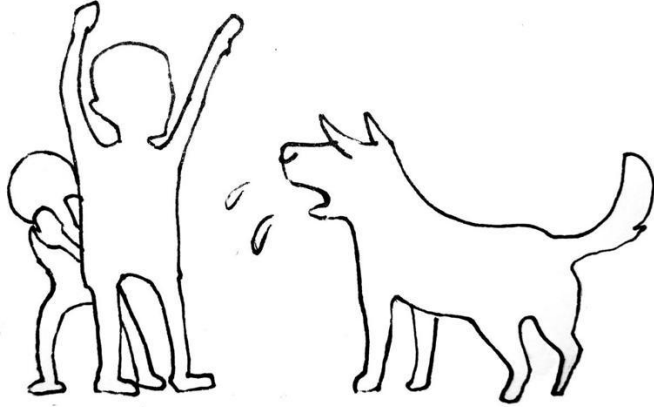
Part I. Do you think that the child who protects the other child from being bitten is…
Do you think that the child who is protected by the other child is…
Part II. Who would you like the child who protects the other child from being bitten to be?
Who would you like the child who is protected by the other child to be?

PP2: Two children are walking along a street where many cars are passing. One child insists on walking on the side where the cars are passing, in order to protect the other child.
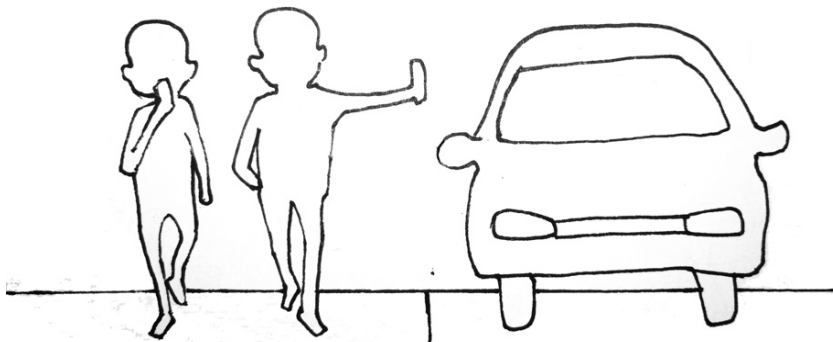
Part I. Do you think that the child who protects the other child is…
Do you think that the child who is protected by the other child is…
Part II. Who would you like the child who protects the other child to be?
Who would you like the child who is protected by the other child to be?

CGD1: In a friends' gathering, two families with children get together for dinner. One parent says 'My child is always really active! Yours is always so polite and sensitive!'
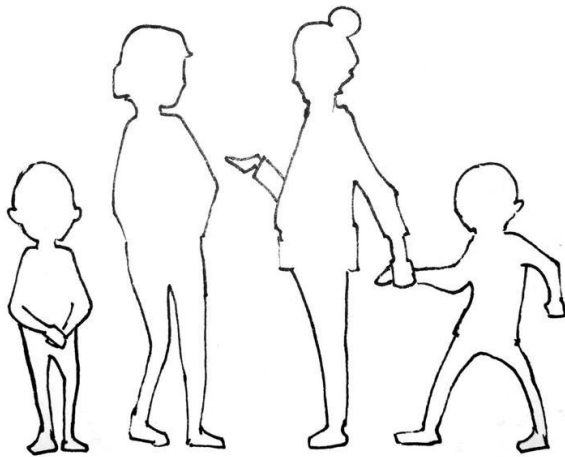
Part I. Do you think that the child the parent is praising as polite and sensitive is…
Part II. Who would you like the child the parent is praising as polite and sensitive to be?

CGD2: This is a family with two children. Today a friend comes for a visit. While having dinner, the friend says to one of the children: 'You are so brave!', and to the other child 'I really like the way you are dressed!'.

Part 1. Do you think that the child who receives the second compliment is…
Part II. Who would you like the child who receives the second compliment to be?

HI1: In this movie there is a character who travels very far and goes through many adventures to win the heart of a person.
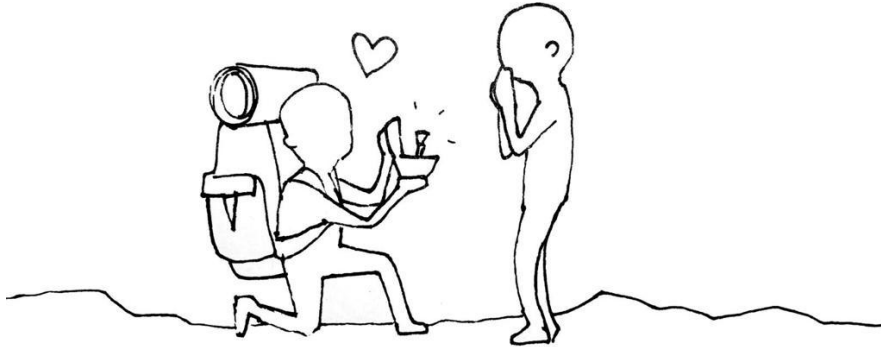
Part I. Do you think that the character who goes through many adventures to win the heart of a person is…

Do you think that the person who's heart the character wants to win is…

Part II. Who would you like the character who goes through many adventures to win the heart of a person to be?

Who would you like the person who's heart the character want to win to be?

HI2: In this movie, there is a character who sits everyday by the window, dreaming and waiting for a person who will do a big effort to win the heart and marry this character.
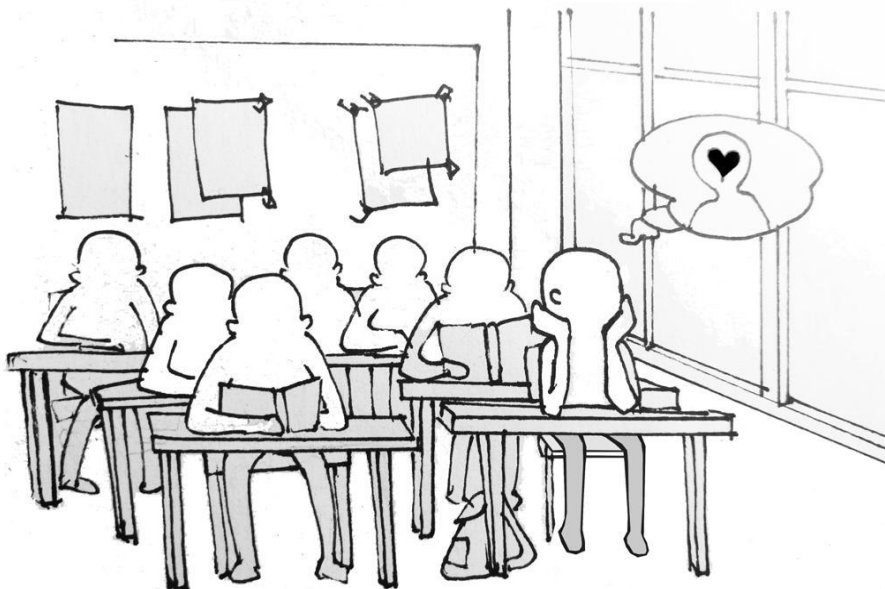
Part I. Do you think that the character who is sitting and waiting by the window is…

Do you think that the person that the character is waiting for is…

Part II. Who would you like the character who is sitting and waiting by the window to be?

Who would you like the person the character is waiting for to be?

Appendix D

CONSENTIMENTO PARA PARTICIPAÇÃO EM ESTUDO DE INVESTIGAÇÃO

Título do Estudo: As relações entre géneros na infância

Instituição: ISCTE − Instituto Universitário de Lisboa (http://iscte-iul.pt/) Centro de Investigação e Intervenção Social (CIS-IUL, http://www.cis.iscte-iul.pt/)

Investigadores Responsáveis: Stefanie Richters, Ricardo Borges Rodrigues, Margarida Cavadas

Endereço eletrónico de contacto: srset@iscte.pt

Ex.mo/a Sr./a Encarregado/a de Educação,

Vimos por este meio solicitar autorização à participação do seu educando no estudo que se encontra a decorrer no Agrupamento de Escolas José Cardoso Pires relativo ao desenvolvimento das relações de género na infância. Concretamente, estamos interessados em estudar a forma como as raparigas e os rapazes interagem e as suas perceções sobre os dois géneros, e de que forma essas relações e perceções se alteram com a idade. Este estudo é realizado pelo Centro de Investigação e Intervenção Social (CIS- IUL) do ISCTE-IUL e obteve a aprovação da Direção do Agrupamento. O estudo decorre no espaço da escola.

A participação de ambos neste estudo é voluntária e muito importante. Os dados recolhidos são confidenciais e serão analisados de forma agregada, isto é, os dados de cada participante não serão objeto de análise individual. Em qualquer momento pode solicitar o acesso aos dados do seu educando contactando Stefanie Richters, através do endereço de e-mail srset@iscte.pt. Agradecemos, desde já, a sua atenção e o interesse que este estudo lhe possa merecer. Os nossos melhores cumprimentos.

A Equipa de Investigação (ISCTE-IUL / CIS-IUL)

Consentimento

Eu, Encarregado/a de Educação do/a Aluno/a _____,
li a informação que consta deste pedido de autorização, e autorizo / não autorizo a participação do meu educando no estudo acima apresentado, sobre o desenvolvimento das relações de género ao longo da infância e adolescência.

Assinatura do Encarregado de Educação: _____
Data: ___ / ___ / 2017, Localidade: _____

Appendix E

Study Script

<u>Introduction and instructions (verbally)</u>
Olá, o meu nome é Margarida. Eu sou investigadora no ISCTE e gostava de saber o que vocês pensam sobre alguns assuntos. Para isso vou fazer-vos umas perguntas muito simples. A vossa participação é voluntária. Isto quer dizer que só participam se quiserem. Se não quiserem participar não há problema, podem dizer-me e podem sair da sala sem qualquer problema.
Querem participar?

Esta atividade vai demorar entre 20 a 30 minutos ao computador. As vossas respostas são confidenciais, isto significa que não colocam o vosso nome, assim, mais tarde não vamos saber quem deu cada resposta. Não há respostas certas ou erradas. Sempre que tiverem alguma pergunta ou haja alguma coisa que não percebam podem perguntar. Basta levantar a mão e eu irei ajudar-vos.

A seguir vão ver algumas imagens e ouvir algumas histórias. As imagens e as histórias são sobre algumas personagens e as coisas que estas personagens fazem ou não fazem. Vou pedir-vos que ouçam as histórias e olhem para as imagens com muita atenção. Gostaria que respondessem, no computador, se acham que a personagem é um rapaz, uma rapariga ou se pode ser tanto um rapaz como uma rapariga. Repara que nesta imagem não está nem um rapaz nem uma rapariga. Só sabemos que é uma criança. Não sabemos se é rapaz, rapariga ou se pode ser um rapaz ou uma rapariga.

Por favor, respondam às questões individualmente - não importa o que os colegas ao vosso lado estão a fazer. Tem atenção, não existem respostas certas ou erradas. Queremos saber como tu pensas, aquilo que tu pessoalmente pensas sobre estas coisas!

Agora vamos praticar como usar estes 5 botões no teclado. Para cada imagem vamos perguntar o que achas que a personagem da história é.
Se acharem que é mesmo um rapaz – nesse caso carregas na tecla amarela.
Se acharem que talvez seja um rapaz – nesse caso carregas na tecla amarela clara.
Se acharem que é um rapaz ou uma rapariga – nesse caso carregas na tecla metade amarela e metade verde.
Se acharem que talvez é uma rapariga – nesse caso carregas na tecla verde clara.
Se acharem mesmo que é uma rapariga – nesse caso carregas na tecla verde.

Têm alguma questão? Podem voltar-se agora para o computador. Por favor, olhem agora para o teclado. Vocês vão usar esses 5 botões do teclado que têm autocolantes coloridos. Por favor, nota que apenas podes usar estes botões para responder às questões, apenas depois de teres ouvido toda a questão. Se não conseguires carregar no botão espera um bocadinho e tenta novamente. Se não tiverem nenhuma dúvida podem colocar os auscultadores. Vão receber mais informações agora. Sempre que tiverem alguma pergunta ou não souberem o que fazer, por favor, levantem a mão. Eu irei ajudar-vos!

E-prime
Page 1: Bem-vindo!
Se percebeste como fazer e queres participar, por favor, carrega na tecla com a seta para continuares!

Page 2: Vamos começar com alguns exemplos para treinares.

Nesta imagem está uma criança a ver televisão.

Page 3:

Achas que esta criança é
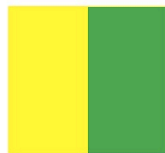
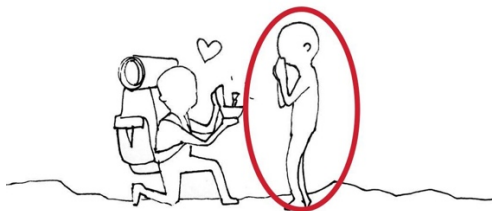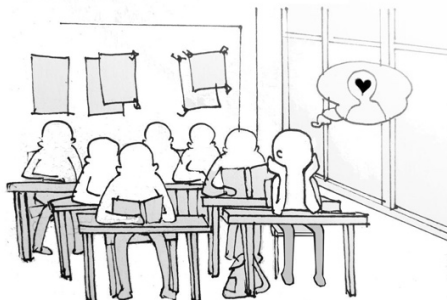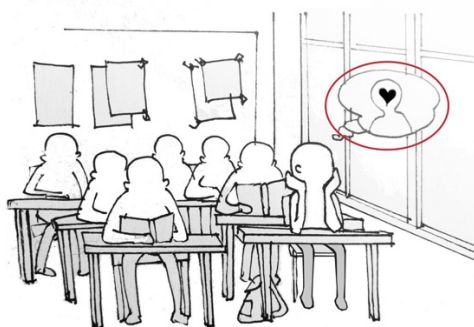|				
Acho mesmo que é um rapaz.	Não tenho certeza. Acho que talvez seja um rapaz.	Acho que é um rapaz ou uma rapariga.	Não tenho certeza. Acho que talvez seja uma rapariga.	Acho mesmo que é uma rapariga.

Lembra-te: Se achas mesmo que é um rapaz, carrega na tecla amarela. Se achas que talvez seja um rapaz, carrega na tecla amarela clara. Se achas que é um rapaz ou uma rapariga, carrega na tecla metade amarela e metade verde. Se achas que talvez seja uma rapariga, carrega na tecla que é verde clara. Se achas mesmo que é uma rapariga, carrega na tecla verde.

Page 4: Vamos fazer outro exemplo!
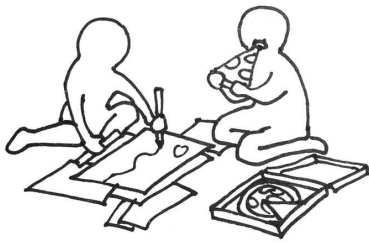
Nesta imagem podes ver duas crianças. Uma criança está a comer. A outra criança está a pintar.

Page 5:
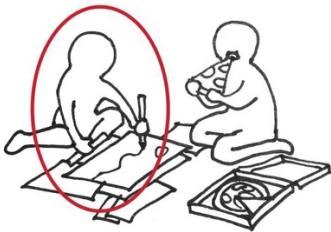
Achas que a criança que está a comer é
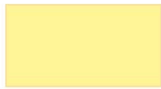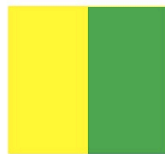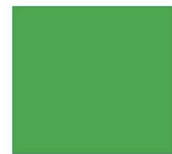
| Acho mesmo que é um rapaz. | Não tenho certeza. Acho que talvez seja um rapaz. | Acho que é um rapaz ou uma rapariga. | Não tenho certeza. Acho que talvez seja uma rapariga. | Acho mesmo que é uma rapariga. |

Page 6:

Achas que a criança que está a pintar é

| Acho mesmo que é um rapaz. | Não tenho certeza. Acho que talvez seja um rapaz. | Acho que é um rapaz ou uma rapariga. | Não tenho certeza. Acho que talvez seja uma rapariga. | Acho mesmo que é uma rapariga. |

<u>Page 7:</u> Muito bem! Vamos agora começar. Lembra-te, diz se achas que cada personagem é um rapaz, uma rapariga ou se tanto pode ser um rapaz como uma rapariga. Pensa sobre o que vês os rapazes e as raparigas a fazer no dia a dia. Se tiveres alguma pergunta por favor, levanta a mão.

<u>Page 8- 31:</u> *CASM Part I (vignettes presented in randomized order)*
<u>Page 8:</u>
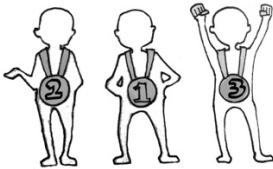
Nesta escola está a decorrer uma competição para as crianças inteligentes resolverem problemas de matemática difíceis.

<u>Page 9:</u>
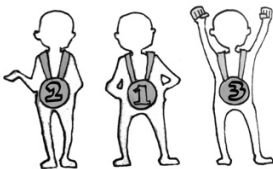
Quem achas que é o vencedor da competição?

| Acho mesmo que é um rapaz. | Não tenho certeza. Acho que talvez seja um rapaz. | Acho que é um rapaz ou uma rapariga. | Não tenho certeza. Acho que talvez seja uma rapariga. | Acho mesmo que é uma rapariga. |
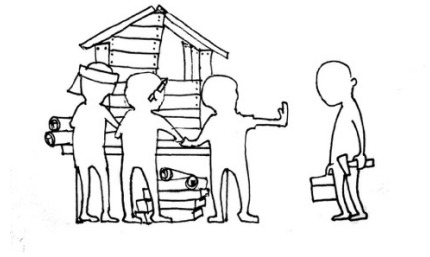
Page 10:

Um grupo de crianças estão a construir uma casa de madeira. Uma criança quer ajudar a construir, mas as outras crianças dizem que é muito difícil para esta criança.

Page 11:

Achas que a criança que não deixam ajudar na construção da casa na árvore é…
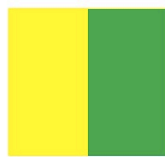
Acho mesmo que é um rapaz.	Não tenho certeza. Acho que talvez seja um rapaz.	Acho que é um rapaz ou uma rapariga.	Não tenho certeza. Acho que talvez seja uma rapariga.	Acho mesmo que é uma rapariga.

Page 12:
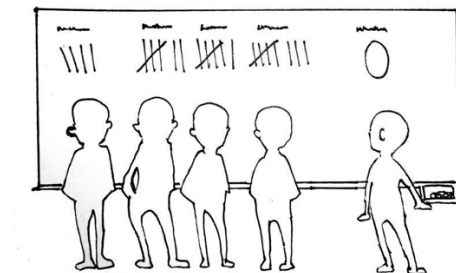
Numa turma o professor pede aos alunos para votarem num colega para ser delegado de turma. Há uma criança que não recebe nenhum voto.
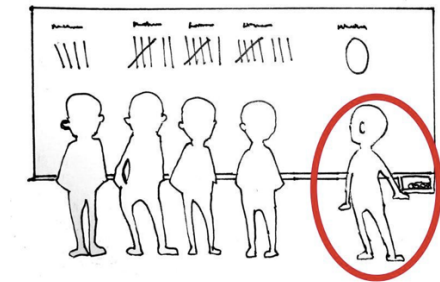
Page 13:

Achas que a criança que não recebe nenhum voto é…

Acho mesmo que é um rapaz.

Não tenho certeza. Acho que talvez seja um rapaz.

Acho que é um rapaz ou uma rapariga.

Não tenho certeza. Acho que talvez seja uma rapariga.

Acho mesmo que é uma rapariga.

Page 14:
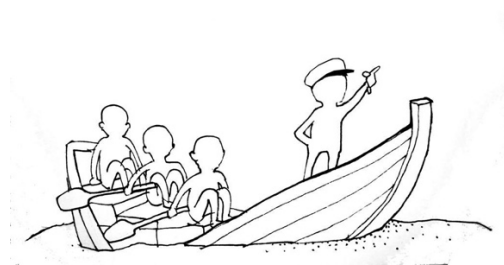
Um grupo de crianças estão a brincar a fingir que estão num barco. Uma criança comanda o barco e toma as decisões importantes.

Page 15:
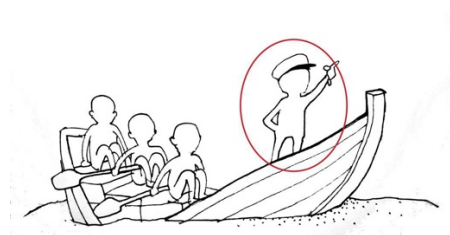
Achas que a criança que comanda o barco é…

Acho mesmo que é um rapaz.
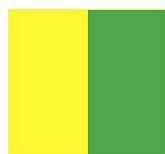
Não tenho certeza. Acho que talvez seja um rapaz.

Acho que é um rapaz ou uma rapariga.

Não tenho certeza. Acho que talvez seja uma rapariga.

Acho mesmo que é uma rapariga.
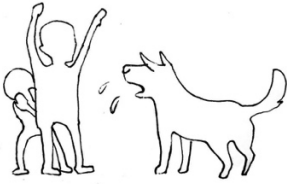
Page 16:

Um cão vai atacar duas crianças. E elas não têm por onde fugir. Uma criança protege a outra de ser mordida.

Page 17:
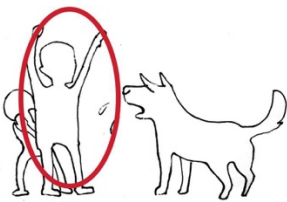
Achas que a criança que protege a outra de ser mordida é…

| Acho mesmo que é um rapaz. | Não tenho certeza. Acho que talvez seja um rapaz. | Acho que é um rapaz ou uma rapariga. | Não tenho certeza. Acho que talvez seja uma rapariga. | Acho mesmo que é uma rapariga. |

Page 18:

Achas que a criança que é protegida pela outra criança é…

Acho mesmo que é um rapaz.

Não tenho certeza. Acho que talvez seja um rapaz.

Acho que é um rapaz ou uma rapariga.

Não tenho certeza. Acho que talvez seja uma rapariga.

Acho mesmo que é uma rapariga.

Page 19:
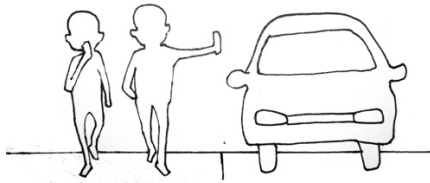
Duas crianças estão a caminhar ao lado de uma estrada onde passam muitos carros. Uma criança insiste em andar do lado onde passam muitos carros, para proteger a outra criança.

Page 20:
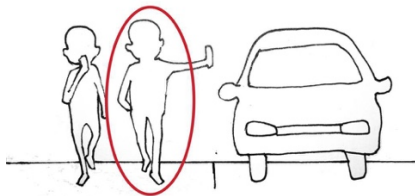
Achas que a criança que caminha do lado dos carros, que protege a outra criança é…

Acho mesmo que é um rapaz.
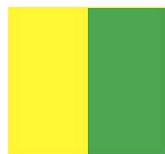
Não tenho certeza. Acho que talvez seja um rapaz.

Acho que é um rapaz ou uma rapariga.

Não tenho certeza. Acho que talvez seja uma rapariga.

Acho mesmo que é uma rapariga.

Page 21:
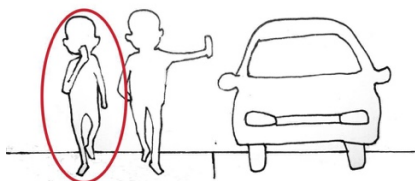
Achas que a criança que é protegida pela outra criança é…

Acho mesmo que é um rapaz.

Não tenho certeza. Acho que talvez seja um rapaz.
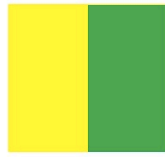
Acho que é um rapaz ou uma rapariga.

Não tenho certeza. Acho que talvez seja uma rapariga.

Acho mesmo que é uma rapariga.
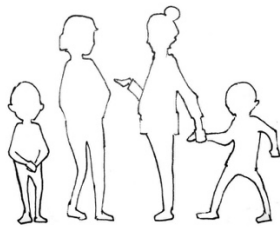
Page 22:

Numa reunião de amigos duas famílias com crianças juntam-se para jantar. Um pai diz "A minha criança é sempre muito ativa! A tua criança é sempre bem-educada e gentil!"

Page 23:

Achas que a criança que este pai está a elogiar como sendo bem-educada e gentil é…

Acho mesmo que é um rapaz.
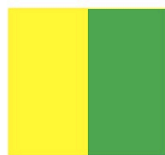
Não tenho certeza. Acho que talvez seja um rapaz.

Acho que é um rapaz ou uma rapariga.

Não tenho certeza. Acho que talvez seja uma rapariga.

Acho mesmo que é uma rapariga.

Page 24:

Esta família tem duas crianças. Hoje uma pessoa amiga vem visitar. Enquanto estão a jantar a pessoa amiga diz para uma das crianças: "Tu és uma criança muito corajosa!" e para a outra criança diz "Gosto muito do que tens vestido!"

Page 25:

Achas que a criança que recebe o segundo elogio é…

Acho mesmo que é um rapaz.	Não tenho certeza. Acho que talvez seja um rapaz.	Acho que é um rapaz ou uma rapariga.	Não tenho certeza. Acho que talvez seja uma rapariga.	Acho mesmo que é uma rapariga.

Page 26:
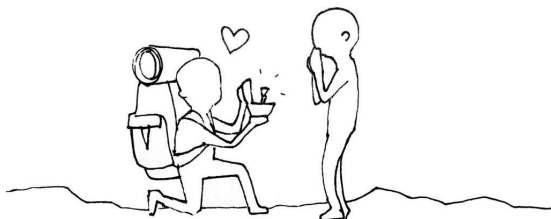
Neste filme existe uma personagem que viaja uma longa distância e vive muitas aventuras para conquistar o coração de uma pessoa.

Page 27:
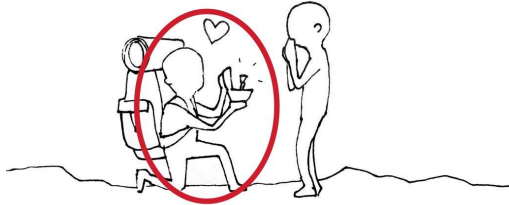
Achas que a personagem que vive muitas aventuras para conquistar o coração de uma pessoa é…
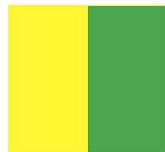
| Acho mesmo que é um rapaz. | Não tenho certeza. Acho que talvez seja um rapaz. | Acho que é um rapaz ou uma rapariga. | Não tenho certeza. Acho que talvez seja uma rapariga. | Acho mesmo que é uma rapariga. |

Page 28:

Achas que a pessoa cujo coração a personagem quer ganhar é…

| Acho mesmo que é um rapaz. | Não tenho certeza. Acho que talvez seja um rapaz. | Acho que é um rapaz ou uma rapariga. | Não tenho certeza. Acho que talvez seja uma rapariga. | Acho mesmo que é uma rapariga. |
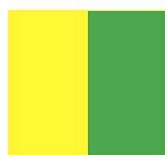
Page 29:

Neste filme, existe uma personagem que se senta junto à janela todos os dias, a sonhar e à espera de uma pessoa que fará um grande esforço para ganhar o seu coração e se casar com esta personagem.

Page 30:
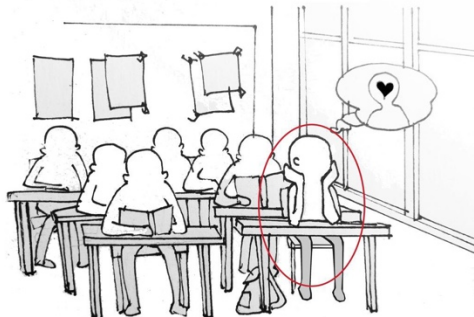
Achas que a personagem que se senta e espera à janela é…
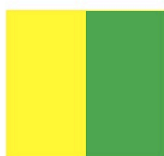
| Acho mesmo que é um rapaz. | Não tenho certeza. Acho que talvez seja um rapaz. | Acho que é um rapaz ou uma rapariga. | Não tenho certeza. Acho que talvez seja uma rapariga. | Acho mesmo que é uma rapariga. |

Page 31:

Achas que a pessoa por quem a personagem está à espera é…
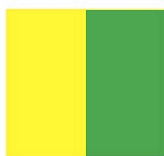
| Acho mesmo que é um rapaz. | Não tenho certeza. Acho que talvez seja um rapaz. | Acho que é um rapaz ou uma rapariga. | Não tenho certeza. Acho que talvez seja uma rapariga. | Acho mesmo que é uma rapariga. |

Page 32: Muito bem! Terminaste agora a primeira parte das questões. Por favor, coloca a mão no ar e diz à investigadora que está contigo na sala que acabaste. Já vais receber novas instruções.

Instructions Part II (verbally)

Muito bem! Terminaste agora a primeira parte das nossas questões. Agora vamos começar a segunda parte.

Agora, vais ver novamente as imagens e ouvir as histórias e irei fazer novamente perguntas sobre elas. Desta vez, estou interessada em saber quem é que tu gostavas que estivesse em cada situação. Se fosses tu a decidir, como seria? As tuas respostas podem ser iguais ou diferentes daquelas que já deste. Às vezes gostamos da forma como as coisas são, mas outras vezes gostávamos que as coisas fossem diferentes.

Irás ouvir novamente as histórias e ver as imagens. Desta vez, diz quem é que gostavas que fosse cada personagem:

Gostava que fosse um rapaz

Não tenho a certeza, mas acho que gostava que fosse um rapaz

Gostava que fosse um rapaz ou uma rapariga

Não tenho a certeza, mas acho que gostava que fosse uma rapariga

Gostava que fosse uma rapariga.

Então, por favor, digam-me: qual é a diferença entre estas questões e as questões que já responderam? (então, antes estávamos interessadas em como as coisas são geralmente, como tu vês a acontecer. Agora queremos saber a tua opinião pessoas: como gostarias que as situações fossem, se fosses tu a decidir?)

Vamos praticar mais uma vez como usar os botões:

Se gostarias que a criança na imagem fosse um rapaz, carrega na tecla amarela.

Se não tens a certeza, mas achas que gostarias que fosse um rapaz, carrega na tecla amarela clara.

Se gostarias que fosse um rapaz ou uma rapariga, carrega na Tecla metade amarela e metade verde.

Se não tens a certeza, mas achas que gostarias que fosse uma rapariga, carrega na tecla verde clara.

Se gostarias que fosse uma rapariga, carrega na tecla verde.

Muito bem! Então, podem voltar-se para o computador novamente e começar esta segunda parte. Lembrem-se que gostaríamos de saber como é que vocês gostarias que as situações fosse. Estão prontos? Se tiverem alguma questão em algum momento, por favor levantem a mão.

Page 33:
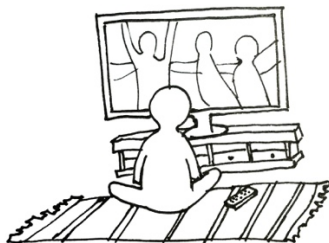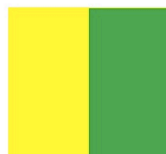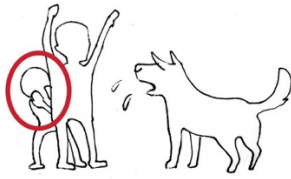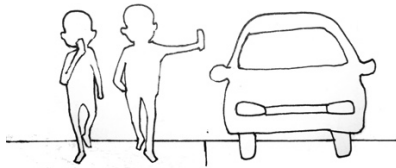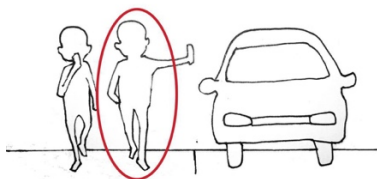

Nesta imagem está uma criança a ver televisão.

Page 34:

Quem gostavas que fosse a criança que está a ver televisão?
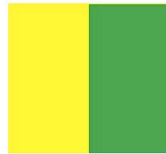
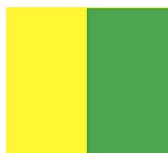| Gostava que fosse um rapaz. | Não tenho a certeza, mas acho que gostava que fosse um rapaz. | Gostava que fosse um rapaz ou uma rapariga. | Não tenho a certeza, mas acho que gostava que fosse uma rapariga. | Gostava que fosse uma rapariga. |

Page 35: Vamos fazer outro exemplo!

Nesta imagem podes ver duas crianças. Uma criança está a comer. A outra criança está a pintar.

Page 36:

Quem gostavas que fosse a criança que está a comer?

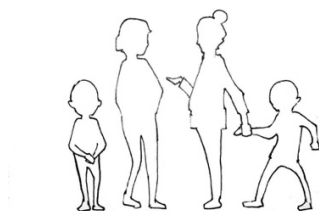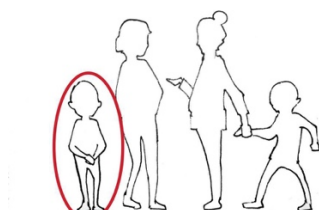| Gostava que fosse um rapaz. | Não tenho a certeza, mas acho que gostava que fosse um rapaz. | Gostava que fosse um rapaz ou uma rapariga. | Não tenho a certeza, mas acho que gostava que fosse uma rapariga. | Gostava que fosse uma rapariga. |

Page 37:
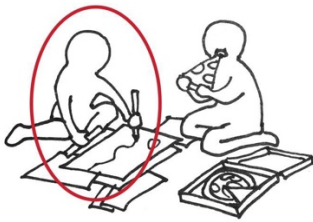
Quem gostavas que fosse a criança que está a pintar?
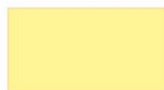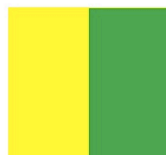
| Gostava que fosse um rapaz. | Não tenho a certeza, mas acho que gostava que fosse um rapaz. | Gostava que fosse um rapaz ou uma rapariga. | Não tenho a certeza, mas acho que gostava que fosse uma rapariga. | Gostava que fosse uma rapariga. |

Page 38: Muito bem! Vamos agora começar. Lembra-te, diz se achas que cada personagem é um rapaz, uma rapariga ou se tanto pode ser um rapaz como uma rapariga. Pensa sobre o que vês os rapazes e as raparigas a fazer no dia a dia. Se tiveres alguma pergunta por favor, levanta a mão.

Page 39: Muito bem! Vamos agora começar.

Page 40- 63: *CASM Part II (vignettes presented in randomized order)*
Page 40:
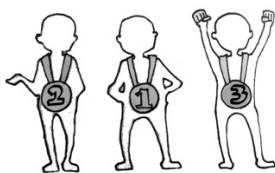
Nesta escola está a decorrer uma competição para as crianças inteligentes resolverem problemas de matemática difíceis.

Page 41:
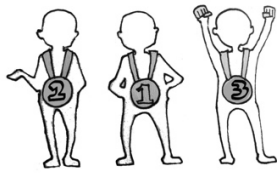
Quem gostavas que fossem os vencedores?

| Gostava que fosse um rapaz. | Não tenho a certeza, mas acho que gostava que fosse um rapaz. | Gostava que fosse um rapaz ou uma rapariga. | Não tenho a certeza, mas acho que gostava que fosse uma rapariga. | Gostava que fosse uma rapariga. |

Page 42:

Um grupo de crianças estão a construir uma casa de madeira. Uma criança quer ajudar a construir, mas as outras crianças dizem que é muito difícil para esta criança.

Page 43:

Quem gostavas que fosse a criança que não deixam ajudar na construção da casa de madeira?

| Gostava que fosse um rapaz. | Não tenho a certeza, mas acho que gostava que fosse um rapaz. | Gostava que fosse um rapaz ou uma rapariga. | Não tenho a certeza, mas acho que gostava que fosse uma rapariga. | Gostava que fosse uma rapariga. |
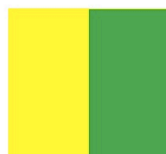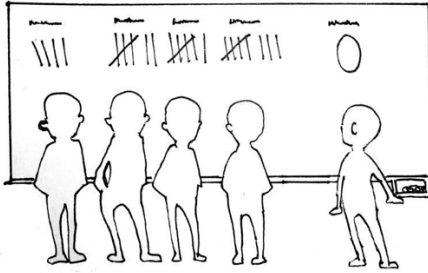
Page 44:

Numa turma o professor pede aos alunos para votarem num colega para ser delegado de turma. Há uma criança que não recebe nenhum voto.
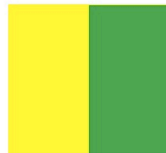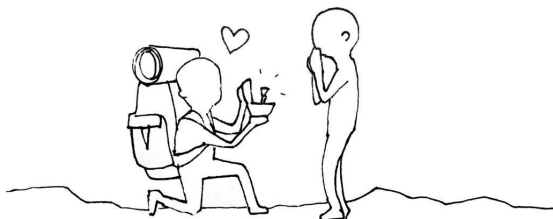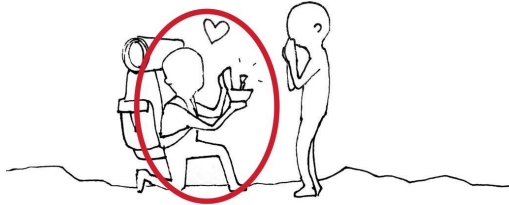
Page 45:
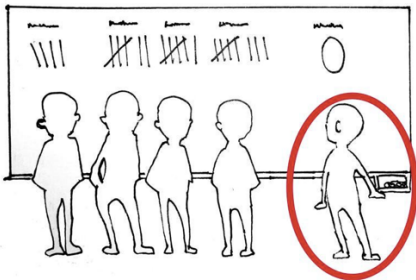
Quem gostavas que fosse a criança que não recebe nenhum voto?
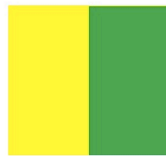
| Gostava que fosse um rapaz. | Não tenho a certeza, mas acho que gostava que fosse um rapaz. | Gostava que fosse um rapaz ou uma rapariga. | Não tenho a certeza, mas acho que gostava que fosse uma rapariga. | Gostava que fosse uma rapariga. |

Page 46:
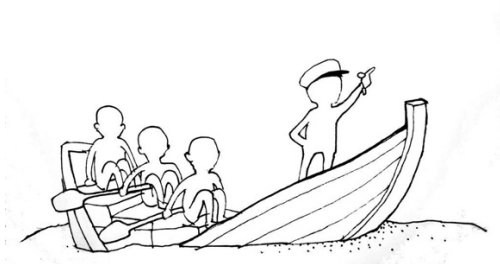
Um grupo de crianças estão a brincar a fingir que estão num barco. Uma criança comanda o barco e toma as decisões importantes.

Page 47:
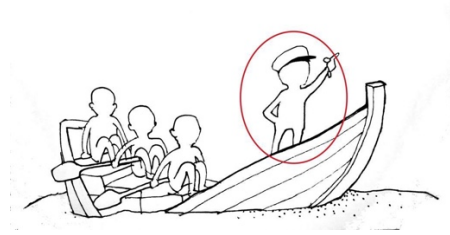
Quem gostavas que fosse a criança que comanda o barco?

Gostava que fosse um rapaz.
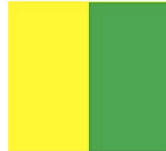
Não tenho a certeza, mas acho que gostava que fosse um rapaz.

Gostava que fosse um rapaz ou uma rapariga.

Não tenho a certeza, mas acho que gostava que fosse uma rapariga.
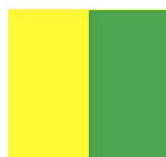
Gostava que fosse uma rapariga.

Page 48:
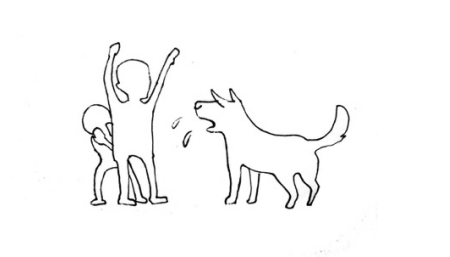
Um cão vai atacar duas crianças. E elas não têm por onde fugir. Uma criança protege a outra de ser mordida.

Page 49:
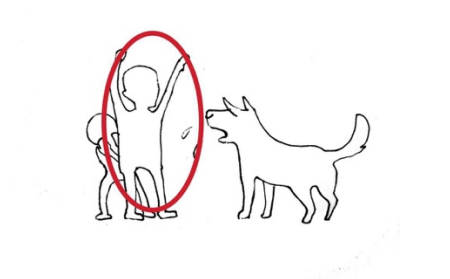
Quem gostavas que fosse a criança que protege a outra de ser mordida?

Gostava que fosse um rapaz.

Não tenho a certeza, mas acho que gostava que fosse um rapaz.
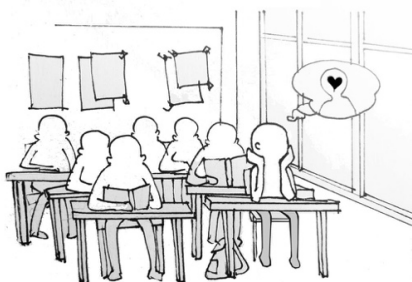
Gostava que fosse um rapaz ou uma rapariga.

Não tenho a certeza, mas acho que gostava que fosse uma rapariga.

Gostava que fosse uma rapariga.

Page 50:

Quem gostavas que fosse que criança que é protegida pela outra criança?

Gostava que fosse um rapaz.

Não tenho a certeza, mas acho que gostava que fosse um rapaz.

Gostava que fosse um rapaz ou uma rapariga.

Não tenho a certeza, mas acho que gostava que fosse uma rapariga.

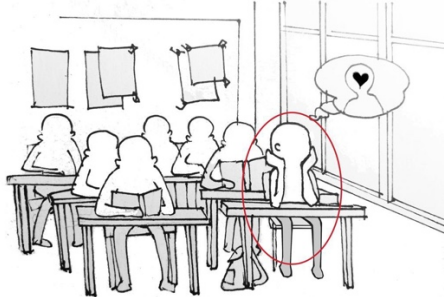Gostava que fosse uma rapariga.

Page 51:

Duas crianças estão a caminhar ao lado de uma estrada onde passam muitos carros. Uma criança insiste em andar do lado onde passam muitos carros, para proteger a outra criança.

Page 52:

Quem gostavas que fosse a criança que caminha do lado dos carros, que protege a outra criança?

Gostava que fosse um rapaz.

Não tenho a certeza, mas acho que gostava que fosse um rapaz.
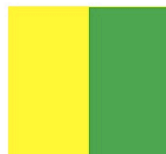
Gostava que fosse um rapaz ou uma rapariga.

Não tenho a certeza, mas acho que gostava que fosse uma rapariga.

Gostava que fosse uma rapariga.

Page 53:

Quem gostavas que fosse a criança que é protegida pela outra criança?

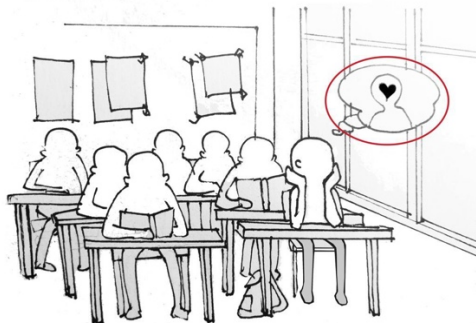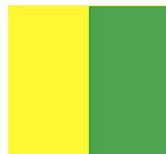| Gostava que fosse um rapaz. | Não tenho a certeza, mas acho que gostava que fosse um rapaz. | Gostava que fosse um rapaz ou uma rapariga. | Não tenho a certeza, mas acho que gostava que fosse uma rapariga. | Gostava que fosse uma rapariga. |

Page 54:

Numa reunião de amigos duas famílias com crianças juntam-se para jantar. Um pai diz "A minha criança é sempre muito ativa! A tua criança é sempre bem-educada e gentil!"

Page 55:

Quem gostavas que fosse a criança que este pai está a elogiar como sendo bem-educada e gentil?

| Gostava que fosse um rapaz. | Não tenho a certeza, mas acho que gostava que fosse um rapaz. | Gostava que fosse um rapaz ou uma rapariga. | Não tenho a certeza, mas acho que gostava que fosse uma rapariga. | Gostava que fosse uma rapariga. |
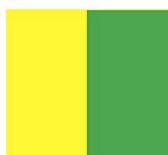
Page 56:

Esta família tem duas crianças. Hoje uma pessoa amiga vem visitar. Enquanto estão a jantar a pessoa amiga diz para uma das crianças: "Tu és uma criança muito corajosa!" e para a outra criança diz "Gosto muito do que tens vestido!"

Page 57:

Quem gostavas que fosse a criança que recebe o segundo elogio?

| Gostava que fosse um rapaz. | Não tenho a certeza, mas acho que gostava que fosse um rapaz. | Gostava que fosse um rapaz ou uma rapariga. | Não tenho a certeza, mas acho que gostava que fosse uma rapariga. | Gostava que fosse uma rapariga. |

Page 58:

Neste filme existe uma personagem que viaja uma longa distância e vive muitas aventuras para conquistar o coração de uma pessoa.

Page 59:

Quem gostavas que fosse a personagem que vive muitas aventuras para conquistar o coração de uma pessoa?

Gostava que fosse um rapaz.
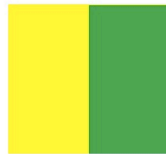
Não tenho a certeza, mas acho que gostava que fosse um rapaz.

Gostava que fosse um rapaz ou uma rapariga.

Não tenho a certeza, mas acho que gostava que fosse uma rapariga.

Gostava que fosse uma rapariga.

Page 60:

Quem gostavas que fosse a pessoa cujo coração a personagem quer ganhar?

Gostava que fosse um rapaz.

Não tenho a certeza, mas acho que gostava que fosse um rapaz.

Gostava que fosse um rapaz ou uma rapariga.

Não tenho a certeza, mas acho que gostava que fosse uma rapariga.

Gostava que fosse uma rapariga.

Page 61:

Neste filme, existe uma personagem que se senta junto à janela todos os dias, a sonhar e à espera de uma pessoa que fará um grande esforço para ganhar o seu coração e se casar com esta personagem.

Page 62:

Quem gostavas que fosse a personagem que se senta e espera à janela?
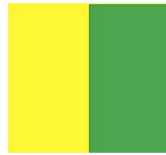
| Gostava que fosse um rapaz. | Não tenho a certeza, mas acho que gostava que fosse um rapaz. | Gostava que fosse um rapaz ou uma rapariga. | Não tenho a certeza, mas acho que gostava que fosse uma rapariga. | Gostava que fosse uma rapariga. |

Page 63:

Quem gostavas que fosse a pessoa por quem a personagem está à espera?

| Gostava que fosse um rapaz. | Não tenho a certeza, mas acho que gostava que fosse um rapaz. | Gostava que fosse um rapaz ou uma rapariga. | Não tenho a certeza, mas acho que gostava que fosse uma rapariga. | Gostava que fosse uma rapariga. |

Page 64: Muito bem! A segunda parte está terminada.
Na próxima parte, gostaria de fazer algumas perguntas sobre o que tu preferes. Vais agora usar botões diferentes do teclado. Olha para os botões que têm os números 1, 2 e 3. Vamos começar com um exemplo. Vou mostrar-te três tipos de comida diferentes. Um de cada vez. E gostaria de saber qual é a comida que gostas mais. E qual é a comida que gostas menos. Para responderes às perguntas usa os números 1, 2 e 3 do teclado. Se escolheres a primeira comida de todas, carrega na tecla 1. Se escolheres a segunda comida que te mostrar, carrega na tecla 2. Se escolheres a terceira comida que te mostrar, carrega na tecla três. Vamos tentar?

Page 65: Vamos fazer um exemplo para praticar:

1   2   3

Chocolate   Piza   Maçãs

Qual é a comida que gostas mais?

Page 66:

1   2   3

Chocolate   Piza   Maçãs

Qual é a comida que gostas menos?

Page 67:

1   2   3

Bolo   Banana   Hamburger

Qual é a comida que gostas mais?

Page 68:

1   2   3

Bolo   Banana   Hamburger

Qual é a comida que gostas menos?

Page 69: Muito bem! Vamos começar!
Gostaria de saber o que queres fazer no futuro. Por favor, pensa sobre ti próprio no futuro. Que profissões gostarias de ter? A seguir vais ver 6 exemplos de profissões que poderias fazer

no futuro. Se não conheceres alguma destas profissões não há problema. Eu vou explicar cada uma delas. Se tiveres alguma questão, por favor, levanta a mão.

Page 70:

Piloto – uma pessoa que pilota um avião

Page 71:

Vendedor - uma pessoa que vende coisas de uma loja a clientes
(female version: Vendedor - uma pessoa que vende coisas de uma loja a clientes)

Page 72:

Cientista – uma pessoa que descobre coisas novas sobre o mundo ou inventa coisas novas

Page 73:

Educador de infância – uma pessoa que ensina e toma conta das crianças no jardim de infância
(female version: Educadora de infância – uma pessoa que ensina e toma conta das crianças no jardim de infância)

Page 74:

Engenheiro – uma pessoa que imagina, planeia e cria máquinas
(female version: Engenheira – uma pessoa que imagina, planeia e cria máquinas

Page 75:

Auxilar de ação educativa – uma pessoa que mantém o espaço da escola limpo e vigia os alunos durante os intervalos

Page 76: Agora vou mostrar-te estas profissões várias vezes, sempre três de cada vez. Lembra-te que gostava de saber o que queres ser no futuro – o que gostarias de fazer? Por favor, diz-me qual a profissão que gostarias mais de fazer e qual gostarias menos.

Page 77- 96: *Measure of future career aspirations (10 rounds presented in randomized order; male / female version each)*

Page 77:

| 1 | 2 | 3 | 1 | 2 | 3 |
| Piloto | Vendedor | Engenheiro / | Piloto | Vendedora | Engenheira |

Qual destas profissões gostarias mais de ter no futuro?

Page 78:

| 1 | 2 | 3 | 1 | 2 | 3 |
| Piloto | Vendedor | Engenheiro / | Piloto | Vendedora | Engenheira |

Qual destas profissões gostarias menos de ter no futuro?

Page 79:

| 1 | 2 | 3 | 1 | 2 | 3 |
| Vendedor | Cientista | Engenheiro / | Vendedora | Cientista | Engenheira |

Qual destas profissões gostarias mais de ter no futuro?

Page 80:

| 1 | 2 | 3 | 1 | 2 | 3 |
| Vendedor | Cientista | Engenheiro / | Vendedora | Cientista | Engenheira |

Qual destas profissões gostarias menos de ter no futuro?

Page 81:

1	2	3	1	2	3
Cientista	Educador de infancia	Vendedor	Cientista	Educadora de infancia	Vendedora

/

Qual destas profissões gostarias mais de ter no futuro?

Page 82:

1	2	3	1	2	3
Cientista	Educador de infancia	Vendedor	Cientista	Educadora de infancia	Vendedora

/

Qual destas profissões gostarias menos de ter no futuro?

Page 83:

1	2	3	1	2	3
Educador de infancia	Piloto	Cientista	Educadora de infancia	Piloto	Cientista

/

Qual destas profissões gostarias mais de ter no futuro?

Page 84:

1	2	3	1	2	3
Educador de infancia	Piloto	Cientista	Educadora de infancia	Piloto	Cientista

/

Qual destas profissões gostarias menos de ter no futuro?

Page 85:

1	2	3	1	2	3
Vendedor	Engenheiro	Educador de infancia	Vendedora	Engenheira	Educadora de infancia

/

Qual destas profissões gostarias mais de ter no futuro?

Page 86:

1	2	3	1	2	3
Vendedor	Engenheiro	Educador de infancia	Vendedora	Engenheira	Educadora de infancia

Qual destas profissões gostarias menos de ter no futuro?

Page 87:

1	2	3	1	2	3
Cientista	Engenheiro	Auxiliar de ação educativa	Cientista	Engenheira	Auxiliar de ação educativa

Qual destas profissões gostarias mais de ter no futuro?

Page 88:

1	2	3	1	2	3
Cientista	Engenheiro	Auxiliar de ação educativa	Cientista	Engenheira	Auxiliar de ação educativa

Qual destas profissões gostarias menos de ter no futuro?

Page 89:

1	2	3	1	2	3
Educador de infancia	Auxiliar de ação educativa	Engenheiro	Educadora de infancia	Auxiliar de ação educativa	Engenheira

Qual destas profissões gostarias mais de ter no futuro?

Page 90:

1	2	3	1	2	3
Educador de infancia	Auxiliar de ação educativa	Engenheiro	Educadora de infancia	Auxiliar de ação educativa	Engenheira

Qual destas profissões gostarias menos de ter no futuro?

Page 91:

1	2	3	1	2	3
Piloto	Vendedor	Auxiliar de ação educativa	Piloto	Vendedora	Auxiliar de ação educativa

Qual destas profissões gostarias mais de ter no futuro?

Page 92:

1	2	3	1	2	3
Piloto	Vendedor	Auxiliar de ação educativa	Piloto	Vendedora	Auxiliar de ação educativa

Qual destas profissões gostarias menos de ter no futuro?

Page 93:

1	2	3	1	2	3
Engenheiro	Piloto	Cientista	Engenheira	Piloto	Cientista

Qual destas profissões gostarias mais de ter no futuro?

Page 94:

1	2	3	1	2	3
Engenheiro	Piloto	Cientista	Engenheira	Piloto	Cientista

Qual destas profissões gostarias menos de ter no futuro?

Page 95:

1	2	3	1	2	3
Auxiliar de ação educativa	Educador de infancia	Piloto	Auxiliar de ação educativa	Educadora de infancia	Piloto

Qual destas profissões gostarias mais de ter no futuro?

Page 96:

1	2	3	1	2	3
Auxiliar de ação educativa	Educador de infancia	Piloto	Auxiliar de ação educativa	Educadora de infancia	Piloto

Qual destas profissões gostarias menos de ter no futuro?

Page 97: Muito bem! Terminaste! Muito obrigada pela tua ajuda! Podes tirar os auscultadores agora e esperar por mais instruções.

Debriefing (verbally)

Muito obrigada por participarem e por responderem às minhas perguntas. Eu mostrei-vos algumas situações para poder perceber se as crianças da vossa idade pensam que os rapazes e as raparigas se comportam de forma diferente nestas situações. Talvez vocês pensem que nestas situações que vos mostrei os rapazes e as raparigas deveriam comportar-se de forma muito diferente ou talvez vocês pensem que não existem diferenças no comportamento dos rapazes e das raparigas. Vamos falar um pouco mais acerca disto.

Há algum exemplo que queiram falar? Querem escolher duas destas imagens para falarmos agora?

Levar folha com as imagens. Vocês não precisam de dizer o que responderam, mas, por exemplo, nesta imagem aqui, pode haver pessoas que acham que as raparigas não podem ajudar na construção da casa de madeira, porque elas não sabem trabalhar com as ferramentas certas. Ou pode haver pessoas que não gostavam que as raparigas trabalhassem nestas atividades como a construção de casas, porque acham que este é um trabalho para rapazes. O que é que vocês acham disto? Acham mesmo que as raparigas não podem trabalhar em coisas de rapazes ou brincar com brinquedos de rapazes? Não conhecem nenhuma rapariga que seja boa a construir casas? Ou que goste de brincar com coisas de rapazes e de raparigas? E se eu te disser que sou muito boa a construir coisas? Que já construí uma casota de madeira para o meu cão? E se te disser que quando era pequenina também gostava de andar de skate e sempre brinquei com Barbies e legos?

E nestas imagens aqui? Pode haver pessoas que acham que quem deve estar a caminhar do lado dos carros ou que deve proteger a outra criança do cão é um rapaz. Mas vocês não acham que os rapazes também podem ser protegidos? Não acham que há raparigas que podem ser quem está a proteger a outra criança nestas situações? Conseguem imaginar rapazes e raparigas a partilhar as mesmas responsabilidades ao ajudar e protegerem-se uns aos outros? Eu acho que sim!

Como podemos ver, os rapazes e as raparigas são iguais em muitas coisas! Mas claro que nem todas as crianças se comportam da mesma maneira. Todos nós somos diferentes, gostamos de coisas diferentes, temos opiniões diferentes e pensamos de forma diferente.

Então quando pensamos que uma pessoa se comporta de uma forma só porque é um rapaz ou uma rapariga não vamos conhecer verdadeiramente quem é esta pessoa, porque nem os rapazes nem as raparigas são todo/as iguais. E porque os rapazes e as raparigas podem ser quem quiserem, pensar como quiserem, gostarem do que quiserem.

Mas não existem apenas diferenças, também somos muito parecidos uns com os outros. Por muito diferentes que o/as outro/as menino/as sejam de ti, existem sempre mais coisas que nos unem. Vocês têm mais perguntas sobre isto ou querem falar de mais alguma coisa?

Muito obrigada por terem participado!

Appendix F

Table 3.6.

Conditional direct and indirect effects of the moderated mediation model.

Conditional direct effects of X on interest in professions			
	B	SE	t
X = Part 1 HS			
Girls	.01	.07	.16
Boys	.01	.06	.12
X = Part 1 PP			
Girls	-.17*	.08	-2.05
Boys	-.05	.08	-.67
X = Part 1 HI			
Girls	.011	.07	.16
Boys	.01	.06	.12

Indirect effects of X through M on interest on professions				
	B	BootSE	BootLLCI	BootULCI
X = Part 1 HS, M = Part 2 HS				
Girls	-.01	.0199	-.06	.02
Boys	.00	.01	-.02	.03
X = Part 1 PP, M = Part 2 PP				
Girls	.01	.04	-.07	.08
Boys	.01	.04	-.07	.09
X = Part 1 HI, M = Part 2 HI				
Girls	-.01	.02	-.06	.02
Boys	.00	.01	-.02	.03

Note. X = predictor. M = mediator. SE = standard error. LLCI & ULCI = lower an upper level of confidence interval. Bootstrap level of confidence interval of 95%. *. Effect is significant at the .05 level (2-tailed).