

Media and the Development of Gender Role Stereotypes

L. Monique Ward and Petal Grower

Department of Psychology, University of Michigan, Ann Arbor, Michigan 48109, USA;
email: ward@umich.edu

Annu. Rev. Dev. Psychol. 2020. 2:177–99

First published as a Review in Advance on
September 15, 2020

The *Annual Review of Developmental Psychology* is
online at devpsych.annualreviews.org

<https://doi.org/10.1146/annurev-devpsych-051120-010630>

Copyright © 2020 by Annual Reviews.
All rights reserved

Keywords

media effects, gender stereotypes, adolescents, television

Abstract

This review summarizes recent findings (2000–2020) concerning media's contributions to the development of gender stereotypes in children and adolescents. Content analyses document that there continues to be an underrepresentation of women and a misrepresentation of femininity and masculinity in mainstream media, although some positive changes are noted. Concerning the strength of media's impact, findings from three meta-analyses indicate a small but consistent association between frequent television viewing and expressing more stereotypic beliefs about gender. Concerning the nature of these effects, analyses indicate significant connections between young people's screen media use and their general gender role attitudes; their beliefs about the importance of appearance for girls and women; their stereotyping of toys, activities, and occupations; and their support for traditional sexual roles. We offer several approaches for moving this field forward, including incorporating additional theories (e.g., stereotype threat), focusing more on boys and ethnic minority youth, and centering developmental milestones.

ANNUAL REVIEWS CONNECT

www.annualreviews.org

- Download figures
- Navigate cited references
- Keyword search
- Explore related articles
- Share via email or social media

Contents

INTRODUCTION	178
HOW ARE GIRLS/WOMEN AND BOYS/MEN PORTRAYED IN SCREEN MEDIA? CONTENT ANALYSES	179
HOW MIGHT EXPOSURE TO THIS CONTENT SHAPE GENDER BELIEFS? THEORETICAL PERSPECTIVES	180
WHAT EVIDENCE IS THERE FOR THE MEDIA'S ROLE IN HOW WE UNDERSTAND AND PERFORM GENDER?	182
Overall Effects: Meta-Analyses	182
Overall Sexist Attitudes/Traditional Gender Roles	182
Appearance Beliefs and Sexualization	184
Toy and Play Behavior	184
Impact on Courtship Beliefs and Gendered Sexual Scripts	185
Beliefs About Occupations, Careers, and Academic Performance	186
DEMONSTRATED IMPACT OF THESE BELIEFS ON YOUTHS' WELL-BEING	187
ANALYSIS OF THE FIELD AND SUGGESTIONS FOR FUTURE RESEARCH DIRECTIONS	188
Expanding Theoretical Foundations	188
Drawing Attention to the Details of Development	189
Incorporating the Role of Race and Intersectional Identities	190
Testing Additional Viewing Cognitions as Direct Predictors and Mediators	190
Integrating Other Socialization Forces	191
Expanding Work on Boys and Young Men	191
Attending to Social Media	191
Attending to "Positive" Portrayals and Counterstereotypes	192
CONCLUSION	193

INTRODUCTION

Gender stereotypes can be defined as beliefs about certain attributes that differentiate how women and men are (descriptive beliefs) or should be (prescriptive or proscriptive beliefs), and frequently address traits, physical characteristics, role behaviors, and occupations (Johar et al. 2003, Leaper 2015). Some prescriptive stereotypes cluster together to create gender ideologies: philosophies about what women and men are like or how they should behave (Perry & Pauletti 2011). Gender stereotypes and ideologies are powerful and affect multiple aspects of our psychological functioning, including perceptions, attention and memory, social behaviors, interests, and self-perceived competencies (Ruble et al. 2006).

As is the case with other belief systems, youth learn their culture's gender norm expectations from those around them, including parents, teachers, and friends. The mainstream media provide particularly powerful models of gender norms for several reasons. First, the media offer abundant models—hundreds—well beyond the dozens that youth may encounter from their families or peers. Moreover, in terms of appearance, confidence, and power, media characters tend to be more “attractive” than average, which increases the likelihood that they will be seen as aspirational role models (Greenwood 2016). Second, the media help shape norms both directly, through individual models, and indirectly, through their impact on the values that parents, peers, and teachers

adopt and transmit (Brown et al. 2005). Third, media consumption levels are very high among youth generally and among adolescents in particular, with these populations reporting 4 hours and 44 minutes and 7 hours and 22 minutes of daily media use, respectively (Rideout & Robb 2019). Finally, media content is believed to be especially well suited for social learning processes because it features simplistic, often one-dimensional models of rules and behaviors that appear regularly (Signorielli 2012). We do not anticipate that media are the only source shaping gender stereotypes but believe they are likely a significant one.

Accordingly, our goal with this review is to present current findings concerning media's contributions to the development of gender stereotypes. We have drawn several parameters to make this review manageable. In terms of media, we have chosen to focus on traditional, entertainment screen media, namely television, film, music videos, and video games. We do not focus heavily on social, print, or news media, but acknowledge that these formats also contribute to gender beliefs. To keep the review current, we have chosen to include literature from the new millennium (2000–2020). Our review of the literature is broad but is not necessarily exhaustive, and centers on scholarly publications. Also, because our interest is in gender development, we focus on studies that tested children or adolescents up to age 18, though we do draw on some findings among adults to offer ideas for future directions. We start with a brief summary of the media content encountered, continue with theoretical and empirical analyses of the impact of exposure to this content, and conclude with eight future research directions.

HOW ARE GIRLS/WOMEN AND BOYS/MEN PORTRAYED IN SCREEN MEDIA? CONTENT ANALYSES

Analyses of the portrayal of social groups in mainstream media have often focused on two issues: recognition and respect. Recognition addresses the quantity of representation and, in terms of gender, has often focused on underrepresentation of girls and women. It has been argued that a lack of recognition signals that women are devalued in society (Ruble et al. 2006). Analyses of diverse types of television programming that target youth consistently find that boys and men outnumber girls and women, with boys/men typically comprising approximately 60% or more of characters (Baker & Raney 2007, Gerding & Signorielli 2014, Hentges & Case 2013, Martin 2017, Sink & Mastro 2017, Walsh & Leaper 2020). Comparable gender proportions have been reported in films targeting children. In G-rated movies, male characters outnumber female characters 2.6 to 1 (Smith et al. 2010); in family films (Smith et al. 2013) and in Disney films (Padilla-Walker et al. 2013), the ratio is 2.5 to 1.

The second issue is one of respect, addressing whether persons of each gender are presented in a way that reflects their complexity and humanity, or whether portrayals are reduced to one-dimensional stereotypes. Analyses have often indicated that members of each gender, especially women, are shown in stereotypic ways, often being defined solely on the basis of their appearance or their behavior in relationships, and with limited personality traits and roles. The first of these stereotypes highlights beauty, thinness, physical appearance, and sexual appeal as being central to girls' and women's value. Multiple analyses of television programs show that girls focus more on their appearance (Baker & Raney 2007, Hentges & Case 2013), are more often judged for their appearance (Rousseau et al. 2018), and are more likely to be sexualized (McDade-Montez et al. 2017) than are boys. For example, in a study of tween programs on the Disney Channel, Nickelodeon, and the Cartoon Network, female characters were more attractive, more concerned about their appearance, and more likely to receive comments about their looks than male characters (Gerding & Signorielli 2014). These patterns are particularly salient in music videos, which have been documented to convey messages that the objectification of women's bodies is normative (e.g., Aubrey & Frisby 2011, Wallis 2011, Ward et al. 2013).

A second set of stereotypes focuses on the personality attributes of each gender. Analyses of diverse genres of children's programming indicate that male characters are more likely than female characters to be physically aggressive and to order others around, and are less likely to be fearful, polite, frail, or romantic (Aubrey & Harrison 2004, Leaper et al. 2002). Recent analyses of prime-time television programming reveal that male characters are more verbally and physically aggressive than female characters and that female characters are better liked and more family oriented than male characters (Sink & Mastro 2017).

A third set of stereotypes addresses roles and occupations. Analyses indicate that men are more often placed in the world of work and women in the home; when women are shown in the workplace, their occupations tend to align with gender stereotypes (Gilpatrick 2010, Lauzen et al. 2008, Smith et al. 2010). For example, in their analysis of top films released from 2010 to 2013, Smith et al. (2014) reported a ratio of 7.6 men working in science, technology, engineering, and mathematics (STEM) to every 1 woman in STEM. At the same time, men are shown as incompetent in the domestic arena. In one study of prime-time television commercials that featured domestic chores, most often child care and cooking, men were depicted as less successful at domestic chores than women, as indicated by their receiving more negative responses from others, less success, and more unsatisfactory outcomes (Scharer et al. 2006). These role distinctions extend to representations of children's daily activities. For example, analyses indicate that toy commercials are highly stereotypical, with 58% of doll commercials and 83% of commercials for animal toys featuring only girls, and 87% of ads for transportation/construction toys and 63% of sports toy ads featuring only boys (e.g., Kahlenberg & Hein 2010).

Differential gender depictions are also seen in the world of relationships. Here, there is evidence that heteronormativity and a corresponding heterosexual script dominate, dictating that courtship strategies, commitment orientations, and sexual goals differ for women and men. This script expects men to actively pursue sexual relationships, objectify women, and prioritize sex over emotion; conversely, women are expected to be sexually passive, use their looks and bodies to attract men, set sexual limits, and prioritize emotions over sex (Kim et al. 2007). References to this script are abundant in mainstream media, appearing 15.5 times per hour in prime-time programs preferred by adolescents and in 11.45% of the interactions between characters on popular tween-oriented programs (Kim et al. 2007, Kirsch & Murnen 2015). Most frequent are references framing men as sex driven and women as passive sexual objects (Aubrey et al. 2019, Ferris et al. 2007).

Although this summary focuses on differences in gender portrayals, we acknowledge that there are also instances in which depictions differ little between female and male characters (e.g., Hentges & Case 2013). In addition, analyses tracking trends over time reveal some improvements in the quantity and quality of representations. For example, findings indicate a decrease of gender-based stereotyping over time in commercials (Eisend 2010, Matthes et al. 2016). Moreover, gender parity was noted in a recent analysis of television programs popular with youth, with female characters accounting for 55% of screen time (Giaccardi et al. 2019); however, women were still seven times more likely than men to be shown in revealing clothing. Thus, despite some notable changes in the portrayals of gender roles, media are believed to continue to offer a window onto a highly stereotyped world (Ruble et al. 2006), exposing children and adolescents to skewed information about gender and underscoring that a lack of recognition and a lack of respect remain significant issues for women.

HOW MIGHT EXPOSURE TO THIS CONTENT SHAPE GENDER BELIEFS? THEORETICAL PERSPECTIVES

Given children's and adolescents' high rates of media consumption and the stereotypical nature of many media portrayals, a central concern has been that heavy exposure to these depictions

contributes to a greater acceptance of gender stereotypes among viewers. Several theoretical models have been used to support these investigations. One of the most-cited theories is cultivation theory (Gerbner 1998), which originated in the field of communications. Cultivation theory offers a macrosystems approach to media effects (Potter 2014), aiming to document cumulative effects of everyday television viewing. It relies on two key assumptions: (*a*) Television presents a consistent yet distorted view of the real world, and (*b*) regular exposure to these messages will lead more frequent viewers to cultivate or adopt social attitudes that align with the content presented. Therefore, individuals who repeatedly view television content that promotes traditional gender stereotypes are expected to be more inclined to accept these stereotypes as true and to endorse these beliefs in their own lives. Cultivation research has generally involved two components, with scholars using content analyses to document the pervasive messages, values, and portrayals depicted across television programs and using survey data to assess how closely viewers' attitudes mirror these depictions.

However, despite its wide usage, cultivation theory has been criticized for its small effect sizes, global measurements of television viewing, and lack of explanatory mechanisms at the individual level (Shrum 2009, Shrum & Lee 2012). Also, because the data are correlational, findings are vulnerable to alternative explanations, including selectivity effects and spurious correlations (Shrum 2009). To address these concerns, scholars have worked to modify and extend cultivation theory from its original formulation. Shrum (2009) and Shrum & Lee (2012) have drawn on social cognition research to identify specific psychological mechanisms undergirding macrolevel cultivation effects. One such mechanism identified is chronic accessibility, whereby exposure to television content is believed to activate related schemas; with each activation, that particular schema or way of viewing the world grows stronger and more accessible. The more accessible certain schemas are in memory, the greater the likelihood that they will be used to guide judgments and behaviors. Therefore, frequent exposure to television's gender stereotypes is believed to activate stereotypical gender schemas, which may influence subsequent judgments and behaviors. A second modification has been an expansion of the media studied. Cultivation theory originally focused on television and on total viewing hours rather than specific genres because television content was believed to be relatively homogeneous across programs. However, today's media landscape is more diversified than that of the 1960s and 1970s, with more niche channels available. Scholars now extend cultivation theory by testing contributions of specific television genres and by testing media other than television (e.g., video games).

Another theory used to support research in this field is social cognitive theory (Bandura 2001). This theory proposes that viewers' scripts, schemas, and normative beliefs are shaped by their engagement with and cognitions about media content, and that these beliefs guide their subsequent behavior. However, exposure alone does not guarantee that the values or behaviors viewed will be adopted; instead, this adoption depends on characteristics of the content and cognitions of the viewer. The likelihood of learning and modeling specific behaviors viewed is believed to depend on factors such as the attractiveness of or identification with media models, the salience of their actions, and the rewards or punishments experienced by the models for their behavior. If the model is perceived as similar to the viewer, as realistic, or as having admirable qualities (e.g., popularity), then there is a greater likelihood that the model's behavior will be emulated.

Because multiple processes likely drive media effects, we view these two theories more as complements than competitors, each identifying mechanisms and methods that can be useful for understanding how media use shapes children's gender stereotypes. With cultivation theory, the focus is on exposure levels as the mechanism, and on contributions of everyday viewing amounts. It is most useful for demonstrating global, cumulative effects of chronic viewing. Social cognitive theory centers observational learning and related cognitions as the mechanisms; it is

more constructivist and addresses perceptions of individual viewers. This focus is very useful for identifying which characteristics make certain youth more vulnerable to media influence. We believe it is advantageous to consider diverse mechanisms, including exposure levels and viewer cognitions and characteristics. We return to additional theoretical issues and mechanisms below (in the section titled Analysis of the Field and Suggestions for Future Research Directions).

WHAT EVIDENCE IS THERE FOR THE MEDIA'S ROLE IN HOW WE UNDERSTAND AND PERFORM GENDER?

Overall Effects: Meta-Analyses

Scholars have been investigating connections between screen media and gender beliefs since the 1970s, and three meta-analyses have been produced summarizing media's effects, all centered on television. In the first meta-analysis, Herrett-Skjellum & Allen (1996) reported average significant correlations of $r = 0.21$ across 11 experimental studies and $r = 0.10$ across 19 nonexperimental studies; neither age nor gender of participants was a significant moderator. The following year, Morgan & Shanahan (1997) published a meta-analysis of 14 nonexperimental studies and reported an average effect size of $r = 0.10$. Most recently, Oppliger (2007) conducted a meta-analysis of 31 studies (33 effect sizes) examining contributions of media use to gender beliefs. Here, the average effect sizes were $r = 0.24$ for experimental studies and $r = 0.12$ for nonexperimental studies. Again, moderation analyses indicated that neither gender nor age was a significant moderator. All but one of the experimental studies had been done with children.

Thus, meta-analyses of experimental and nonexperimental studies consistently show an association between frequent television viewing and expressing more stereotypic beliefs about gender roles. Moreover, the effect sizes reported are similar to those of other areas of media psychology. For example, average effect sizes for media and body dissatisfaction are reported as $d = -0.28$ (Grabe et al. 2008); average effect sizes for prosocial media and helping behavior are reported as $r = 0.18$ (Coyne et al. 2018); and the average effect size of violent video game exposure and aggression is reported as $r = 0.18$ (Greitemeyer & Mügge 2014). Although these effect sizes are small, they are meaningful because they demonstrate the consistency of media in shaping beliefs. Moreover, because media exposure is a chronic process that unfolds throughout development, small effects may compound over time.

Overall Sexist Attitudes/Traditional Gender Roles

Meta-analyses give only an overview of the strength of findings in a field. In the remainder of this section, we review the nature of findings in several areas, with attention to methods and constructs tested.

One domain of gender beliefs studied is traditional gender role attitudes. In some cases, scholars use a gender belief scale, such as the Attitudes Toward Women Scale for Adolescents (ATWSA) (Galambos et al. 1985), which assesses participants' agreement with statements about the attributes and roles acceptable for each gender, in general (e.g., "Boys are better leaders than girls"). In studies using this scale, results typically vary by media genre. Surveying US high school students, Ward & Friedman (2006) found that heavier consumption of daytime talk shows was associated with stronger support of traditional gender roles, but regular viewing of 21 "sexy" prime-time television programs or of music videos was not. Ward et al. (2005) surveyed 152 Black adolescents (70% girls) and found that more frequent consumption of music videos and sports programming was each associated with stronger support of traditional gender roles; overall prime-time viewing and movie viewing were not related.

Stronger effects have emerged in analyses that used experimental designs to test whether exposure to stereotypical content predicts greater acceptance of traditional gender roles. In one study, adolescents exposed to stereotypical clips from television comedies and dramas reported more traditional gender role attitudes than those exposed to neutral content (Ward & Friedman 2006). In another study, adolescents exposed to stereotypical music videos endorsed more traditional gender roles and valued stereotypical attributes in women (e.g., attractiveness) to a greater extent than students without this exposure (Ward et al. 2005). In a third study, Italian high school students were assigned to play a violent and sexist video game, a violent-only video game, or a non-violent game, and then to report their beliefs about masculinity and their empathy for a female victim of violence (Gabbiadini et al. 2016). Participants who played the violent and sexist game reported stronger support of traditional masculinity than those who played the neutral game. In addition, playing the violent and sexist game decreased empathy for female victims among boys who identified with the game character, and did so by increasing their support of traditional masculinity.

Scholars have also examined whether everyday exposure to screen media is associated with beliefs about specific gender-related roles, such as motherhood. For example, high school students who watched more pregnancy-related reality television programs (e.g., *Teen Mom*) reported a greater belief that adolescent mothers have a higher quality of life and a high income and that the adolescent fathers are more involved with raising the child (Martins & Jensen 2014). Similar associations have been noted concerning other genres. Among Dutch adolescent girls (aged 15–17) and young women (aged 20–22), heavier exposure to both American and Dutch sitcoms and soap operas was associated with more traditional expectations about motherhood (Ex et al. 2002).

In some analyses of this issue, scholars have focused specifically on ethnic minority youth, who are understudied but are heavy media consumers. Rivadeneyra & Ward (2005) examined Latinx high schoolers' everyday exposure to 132 popular Spanish- and English-language television programs, including prime-time programs, soap operas, and talk shows. Even controlling for cultural identity factors, watching more Spanish prime-time television, Spanish and English talk shows, and Spanish soap operas each correlated with girls' endorsement of traditional gender roles; boys' beliefs were not affected. When variables were entered simultaneously into a regression model among girls, Spanish prime-time comedies, English talk shows, and perceived realism all emerged as significant predictors. Similarly, Anyiwo et al. (2018) examined how exposure to both mainstream and Black-oriented television programs was related to adolescents' endorsement of traditional gender roles and of one race-specific role: the ideal of the strong Black woman. Surveying Black adolescents aged 12–18, they found that greater consumption of 17 mainstream programs was related to lower endorsement of traditional gender roles among boys, and heavier consumption of 12 Black-oriented programs was linked to higher endorsement of the strong Black woman ideal for boys and girls. These studies demonstrate the value of taking a nuanced approach to understanding effects of different types of media on the gender beliefs of ethnic minority youth.

In addition to examining direct effects, this research has explored the role of several potential moderators, including gender, identification with media models, and perceived realism. Results indicate that some effects exist only for girls (e.g., Rivadeneyra & Ward 2005) and some only for boys (e.g., Gabbiadini et al. 2016). In other instances, increased identification with media models (e.g., Ward et al. 2005) and higher levels of perceived realism appear to enhance media effects (e.g., Martins & Jensen 2014, Rivadeneyra & Ward 2005). Overall, this body of research illustrates that although frequent or directed exposure to media stereotypes is associated with adolescents' stronger support of traditional gender roles, effects vary by viewer race and gender and by genre.

Appearance Beliefs and Sexualization

A second domain of gender beliefs studied includes beliefs about the importance of appearance for girls and women, highlighting that women are expected to be beautiful and, as they get older, sexually appealing. Research in this area has typically drawn on premises of objectification theorists (Fredrickson & Roberts 1997), who argue that regular exposure to society's treatment of women as sexual objects leads women to internalize this perspective, increasing their tendency to self-objectify and to value themselves more for their appearance than for other aspects of the self. Given the prevalence of sexually objectifying images of women in the mainstream media (for a review, see Ward 2016), the concern is that regular media use will lead girls to self-objectify and to have dysfunctional appearance beliefs, more broadly. Findings using several approaches have confirmed these expectations.

Some research has explicitly examined whether exposure to objectified portrayals is associated with children's beliefs about appearance. Slater & Tiggemann (2016) surveyed 300 Australian girls aged 6–9, asking about their preference for sexualized clothing, their body dissatisfaction and body esteem, and their consumption of popular children's programs and magazines, each of which was subsequently coded for its degree of sexualization. Results indicated that girls who watched more sexualized television preferred sexualized clothing for other girls and believed that boys would like girls to wear such clothes; girls who consumed more sexualized magazines preferred sexier clothes for themselves. Notably, this preference for sexier clothing was related to higher body dissatisfaction. In another study, girls (aged 6–11) who regularly watched television programs with more sexualized content were more likely to adopt a "sexualized girl stereotype" (Stone et al. 2015, p. 1606) when asked to comment on images of sexualized and nonsexualized girls. This stereotype was defined by perceiving the sexualized girl as more popular but as less athletic, less smart, and less nice than the nonsexualized girl.

Similar results have emerged among tweens and adolescents. In a two-wave panel study conducted among Belgian youth aged 11–14, more frequent viewing of eight tween television programs was related to the internalization of mainstream beauty ideals and the belief that beauty is rewarded (wave 1), which in turn predicted adolescents' tendency to equate their worth with their physical attractiveness at wave 2 (Trekels & Eggermont 2017b). Among a similar sample of 785 Belgian girls ($M_{\text{age}} = 11.65$), time 1 exposure to tween television programs was linked to greater time 2 engagement in appearance management behaviors (e.g., applying makeup) (Trekels & Eggermont 2017a). As an example, those who watched the tween television programs one or twice per week were four times more likely to initiate hairstyling behaviors and twice as likely to start applying makeup compared with girls who never watched these tween programs. Finally, surveying 176 Black adolescent girls, Gordon (2008) found that greater viewing of Black sitcoms and Black music videos each correlated with greater endorsement of the importance of appearance for women, although these effects were not significant in regressions with other media variables included. Together, these findings illustrate the role of media in perpetuating objectified and sexualized ideals for women and highlight that girls do grapple with and internalize these depictions.

Toy and Play Behavior

A third domain of gender beliefs studied has been beliefs about toys and play behavior. Research reveals strong effects of stereotypic media portrayals on children's gendered toy and playmate preferences. For example, in two studies, young children were shown media content that featured girls and boys playing with toys traditionally associated with their gender (e.g., boys playing with an airplane set) or as counterstereotypical (e.g., girls playing with trucks) (Pike & Jennings 2005, Spinner et al. 2018). Across both studies, exposure to stereotypical content reinforced

gender-typed assumptions, such that children exposed to this content judged gender-neutral or gendered toys as being exclusively for one gender and expressed a strong preference for same-gender playmates. In contrast, children exposed to counterstereotypical media content were significantly more likely to judge gendered or gender-neutral toys as being for both girls and boys and to show equal preference for a same- or other-gender playmate.

One set of studies has looked more specifically at children's participation and engagement with princess and superhero media. The Disney Princess line currently includes 14 films, excluding sequels and remakes, beginning with *Snow White and the Seven Dwarfs* (1937) and ending with *Moana* (2016). Each film features a central female character who is often a princess or community leader. This so-called princess culture (PC) has proven to be a lucrative industry, with princess merchandise, including clothing, games, toys, dolls, and home décor, earning \$5.5 billion in 2015 (Robinson et al. 2020). PC may also help shape children's femininity norms by providing prime examples of idealized feminine figures (England et al. 2011). Using longitudinal methods, Coyne et al. (2016) investigated whether young children's engagement with Disney princess media and related products was associated with greater stereotypical behavior. At time 1, parents reported on their children's PC engagement, which was defined as children's frequency of viewing PC media, playing with PC toys, and identifying with individual princesses. Children also noted their preferences for certain gender-typed toys. For both girls and boys, PC engagement was associated with greater levels of female gender-stereotypical behavior (e.g., playing with dolls or tea sets) but not male gender-stereotypical behavior (e.g., climbing). In addition, for both girls and boys, PC engagement at time 1 was associated with greater female gender-stereotypical behavior one year later, even after controlling for initial levels of stereotypical behavior. These effects were most prominent among children whose parents actively talk with them about media content.

Fewer studies have examined associations between gender beliefs and engagement with superhero media, although new research is emerging. For example, Coyne et al. (2014) conducted a longitudinal survey assessing 3–6-year-olds' exposure to superhero media content and toy play and preferences. For boys but not girls, exposure to superhero media content predicted greater play fighting, sports play, and playing of ball games. However, exposure to superhero content did predict girls' weapon play, and parental mediation exacerbated the effects of superhero exposure on girls' weapon play, contributing to greater gender-stereotypical play.

Impact on Courtship Beliefs and Gendered Sexual Scripts

A fourth domain of gender beliefs that could be influenced by screen media use includes beliefs about courtship, sexual roles, and sexual relationships. Approximately a dozen studies have tested this issue among adolescents, with mixed and often conditional results. Some analyses testing associations between everyday screen media use and adolescents' endorsement of gendered sexual roles have reported null results (Peter & Valkenburg 2007, ter Bogt et al. 2010, Vandenbosch & Eggermont 2011). For example, in a survey of US high school students (80% White, 59% girls), Ward & Friedman (2006) found that participants' viewing of music videos, daytime talk shows, and 21 sexy prime-time programs did not predict notions that women are sexual objects or men are sex driven. In other studies, the presence of significant associations is conditional, varying based on gender, genre, or parental socialization and attachment (Miller et al. 2017, Rousseau et al. 2019, van Oosten et al. 2015, Vandenbosch & Eggermont 2012, Ward et al. 2005). Perhaps the clearest set of significant associations was reported by Rousseau & Eggermont (2018). Controlling for gender, age, body mass index, and overall television viewing, they found that exposure to three popular Flemish programs rated as sexually objectifying was associated with greater acceptance of objectified dating scripts among Flemish youth aged 10–13. Together, these results suggest that

media associations with gendered sexual scripts may exist but may be more nuanced than expected, and likely vary by gender and medium/genre.

Surprisingly, however, we do see experimental evidence from one-time laboratory exposure to traditional courtship scripts. Polo-Alonso et al. (2018) assigned adolescents and emerging adults to view a movie with stereotypical sexual roles (*Friends with Benefits*) or a control film (*Ice Age*). Although there were no condition effects for the emerging adults, among adolescents, those who had seen the stereotypical sexual roles offered greater support of rape myths, of men as sex driven, and of women as sexual objects than did adolescents in the control condition. This pattern suggests that adolescents may be particularly susceptible to these stereotypes. In another study, Driesmans et al. (2016) had a group of 88 Dutch youth aged 11–14 watch the popular tween movie *High School Musical* or a control film. Results demonstrated no main effect of condition but revealed an interaction among age, parasocial interaction, and condition, whereby younger girls exposed to *High School Musical* who were high in parasocial attachment (feelings of closeness with celebrities) were more likely to endorse romantic myths (e.g., “I am likely to fall in love almost immediately if I meet the right person”).

Experimental exposure to specific sexual stereotypes has also been linked to adolescents’ gender beliefs. After exposure to four music videos rich in sexual stereotypes, Black teens offered stronger support of statements painting women as sexual objects and men as sexual players than did teens who had viewed nonstereotyped videos (Ward et al. 2005). Among a predominantly White sample of high school students, those exposed to television clips featuring women as sexual objects offered greater acceptance of traditional gender roles and of women as sexual objects than did students who had not viewed these stereotypes (Ward & Friedman 2006). Finally, Driesmans et al. (2015) found that Belgian adolescents who were assigned to play a novel video game with a sexualized female character later expressed more tolerance of rape myths and of sexual harassment than teens who played the same game with a nonsexualized character.

Beliefs About Occupations, Careers, and Academic Performance

A fifth domain of gender beliefs that could be shaped by media exposure includes assumptions, expectations, and preferences concerning academic achievement and career selections. With the thought of “if you can see it, you can be it,” there has been concern that the underrepresentation of professional women on the screen may diminish the academic and professional aspirations of young female viewers. Empirical research has borne out this assumption, although there are few cross-sectional or longitudinal studies testing these dynamics. Some early research supported the notion that girls exposed to nonstereotypical portrayals of occupations on television were more flexible about some adult roles and activities (Rosenwasser et al. 1989, Wroblewski & Huston 1987). In one of the few studies to test this issue in the new millennium, Grabe & Hyde (2009) surveyed 195 seventh-grade girls (89.4% White) concerning their frequency of viewing music videos and multiple aspects of their psychological well-being, including their perceived confidence in math. Path analyses indicated that music video viewing predicted lower math confidence both directly and indirectly, via greater body surveillance. These authors suggest that because music videos often emphasize women’s sexual qualities and ignore their other competencies, exposure to this content may diminish girls’ confidence in the traditionally male-dominated domain of math.

Experimental data yield stronger evidence. First, exposure to traditional media content that highlights women’s appearance or sexual appeal has been linked to diminished academic performance or weaker interest in certain careers (Pacilli et al. 2016, Slater et al. 2017). For example, Pacilli et al. (2016) assigned 79 Italian children in grades 3–5 (57% female, $M_{\text{age}} = 9.29$) to view either two sexualized or two nonsexualized images of girls and then take a math test. Across grades,

girls who had seen the sexualized images performed worse on the math test than did girls who had seen the nonsexualized images; there were no condition effects for boys. In a second study, 102 children in grades 3–5 (50% girls) viewed one sexualized or one nonsexualized photo of a same-gender child, completed a digit span test to assess working memory, and then completed math problems. Boys and girls in the sexualized condition did worse on the math test than participants in the nonsexualized condition. Moreover, mediation analyses indicated that effects on math performance of viewing same-gender sexualized images were mediated by a reduction in working memory resources.

Second, exposure to traditional gender stereotypes has been linked to less interest in STEM fields for girls, although findings do not appear for all dependent variables (Bond 2016, Wille et al. 2018, Ziegler & Stoeger 2008). For example, Bond (2016) assigned 60 girls aged 6–9 to view television clips featuring traditional stereotypes of women, portrayals of women in STEM careers, or no programming. Participants then indicated their confidence in their science and math skills, noted their preference for six STEM careers (e.g., scientist, architect) and six non-STEM careers (e.g., florist), and drew a picture of a scientist. Girls who had viewed the stereotyped clips were more likely to report interest in stereotypical careers than any of the other girls and were less likely to draw women as scientists; there was no effect of condition on math and science self-efficacy. Finally, playing a digital learning game about science led to stronger interest and motivation in STEM, depending on children's age and whether they played as a female or male scientist (Hawkins et al. 2019). Together, these findings suggest that, across multiple media, viewing women in traditional or nontraditional careers can have an impact on children's beliefs about gender abilities and careers.

DEMONSTRATED IMPACT OF THESE BELIEFS ON YOUTHS' WELL-BEING

Why does it matter if young people develop gender stereotypes borne partially out of narrow media portrayals? Decades of psychological research indicate that adopting the constrained view of what is expected and acceptable for one's gender has significant implications for adolescents' and young adults' well-being on multiple dimensions. For adolescent girls and young women, stronger acceptance and internalization of traditional femininity ideologies, which prioritize passivity, nurturance, and beauty, are associated with greater symptoms of depression and anxiety, lower self-esteem, greater likelihood of developing eating disorders, and diminished sexual agency (e.g., Curtin et al. 2011, Tolman et al. 2006, Zurbriggen et al. 2007). Moreover, because girls' appearance focus is perceived to be incompatible with other traits, including intelligence (e.g., Starr & Ferguson 2012, Stone et al. 2015), girls who conform to sexualized appearance ideals may come to see themselves as less competent. Indeed, Brown (2019) found that greater endorsement of sexualized gender stereotypes among adolescent girls predicted lower academic self-efficacy over time.

Detrimental consequences are also observed for young men who rigidly adhere to traditional notions of masculinity. Among the many outcomes reported, stronger endorsement of traditional masculinity is linked with negative mental health, depression, psychological distress, and substance use (Wong et al. 2017); with attitudes that are more supportive of dating and sexual violence and with greater perpetration of sexual aggression (Murnen et al. 2002); and with a greater likelihood of unprotected sex (e.g., Pleck et al. 1993, Santana et al. 2006). Stronger endorsement of traditional masculinity is also linked to higher levels of risk taking. For example, among undergraduate men, greater media use was linked to stronger support of traditional masculinity, which, in turn, was linked to greater levels of sexual risk taking, alcohol use, drug use, and speeding (Giaccardi et al. 2017).

ANALYSIS OF THE FIELD AND SUGGESTIONS FOR FUTURE RESEARCH DIRECTIONS

The studies and meta-analyses reviewed here offer significant indications that exposure to screen media, both regularly at home and experimentally in the lab, is linked to children's and adolescents' gender role stereotypes. Empirical evidence indicates that exposure to screen media contributes to girls' overvaluing their appearance, to girls' and boys' constraining their academic and career interests and expectations, and to narrowed notions about the personality attributes that are appropriate or encouraged for women and men. The findings reported here also demonstrate that these beliefs and assumptions have consequences for multiple domains of young people's well-being. Given that modern youth spend more time using screen media than doing any other activity except sleeping, it is critical that developmental psychologists consider how the mediated content and images that young people encounter could be shaping their assumptions about femininity and masculinity. We acknowledge that although mainstream media are not the only force contributing to gender role stereotypes, they are a significant one.

Yet despite the breadth of demonstrated influence on children's and adolescents' gender development, media remain an understudied socialization force. Although associations between media use and gender beliefs have been studied since the 1970s, there are still many significant gaps in the literature. In the following subsections, we describe some holes in the literature and present possible directions for future research.

Expanding Theoretical Foundations

One means by which we could broaden current approaches is by incorporating other theories to guide our research questions and methodologies. Most existing studies examining media contributions to young people's gender stereotypes are grounded in social cognitive theory and cultivation theory. One theory that could be integrated into this family is stereotype threat theory, which is used heavily in social psychology. According to this theory, individuals' performance in a particular domain may be hindered when they are confronted or threatened with the possibility of confirming a negative stereotype of their in-group's ability related to that domain (Steele & Aronson 1995). In terms of gender, this theory has most commonly been applied concerning the stereotype that women are bad at math or related STEM fields. In the typical experimental paradigm, performance on math problems is compared between women who have and have not been cued with the negative stereotype, with the expectation that their performance will suffer as a result of the cue, irrespective of actual ability. Extensive research indicates that women experiencing stereotype threat indeed perform worse on math problems in comparison both to women not experiencing stereotype threat and to men, with small to moderate effect sizes typically reported (for reviews, see Schmader et al. 2008, Spencer et al. 2016).

A critical expansion of this research could come in terms of the cues used to trigger the negative stereotypes. Typically, the subtle cues used have included indicating one's gender on a demographic questionnaire, interacting with a sexist man, overhearing a female peer experiencing threat, or being outnumbered by men (Van Loo & Rydell 2014). We believe that media could serve as powerful cues that could trigger stereotypes about women's (and men's) abilities. Several stereotype threat studies conducted among adults have used stereotypical media content to cue negative stereotypes about women; as expected, women exposed to this content reported lower performance on math problems and less interest in math-oriented careers and in leadership than women exposed to control or counterstereotypical content (e.g., Davies et al. 2002, 2005; Simon & Hoyt 2013). Women have also been shown to underperform in math after watching on video

or encountering in virtual settings a sexist, dominant man or math instructor (Chang et al. 2019, Van Loo & Rydell 2014).

However, this exciting and creative research has been conducted mainly among adults; it would be fruitful to extend this approach to children and adolescents. Do girls underperform in math and science problems after exposure to media cues about particular gender stereotypes? It would also be useful to look outside of performance in math to performance in other areas, such as athletics for girls (“throwing like a girl”) or nurturing for boys. For example, might exposure to television commercials of men as incompetent parents diminish boys’ competence and confidence in caretaking tasks? Researchers could also test competing cues, for example, testing whether (a) exposure to STEM media content with no women or (b) exposure to content where women are shown as incompetent in STEM is more detrimental to girls’ STEM performance.

Another means by which to expand current approaches is to draw on selective exposure theories, which would help us better understand which children and adolescents are most and least vulnerable to media effects. Current applications of cultivation theory and social cognitive theory tend to focus on whether or not certain media shape participants’ stereotypes. However, given that media content affects some of the people some of the time, it would be beneficial to also examine individual difference factors that shape selection, interpretation, and vulnerability to effects. This stance is reflected in the youth-oriented media practice model developed by Steele & Brown (1995). The media practice model posits that adolescents are intentional in their media choices, that these choices are shaped by their identities and lived experiences, and that together these characteristics influence how they interpret and develop meaning from media content. Indeed, identity and personal characteristics, such as age, race, pubertal status, gender, and religiosity, have all been found to shape adolescents’ media diets and choices (e.g., Bleakley et al. 2011, Bobkowski 2009, Brown & Pardun 2004, Brown et al. 2005, Hawk et al. 2006, Kim et al. 2006, Schooler et al. 2009).

Drawing on this model, researchers could begin to examine which youth are drawn to more stereotypical or counterstereotypical media content. For example, what role do peer group norms or feminist identity play? Brown et al. (2005) found that early-maturing girls were more likely to listen to sexually suggestive or explicit lyrics and to view more R-rated films than their late-maturing counterparts. Might pubertal status also contribute to girls’ and boys’ preferences or acceptance of certain gender portrayals? Because the new television viewing format of streaming services (e.g., Netflix, Hulu) has increased the role of viewer selectivity, incorporating this component into future research could be highly informative.

Drawing Attention to the Details of Development

Scholars in this area should also consider the role of development in the phenomena under study. First, we need more research comparing children at different phases of development. How do younger and older children respond to the same gender-stereotyped content? Which age is most vulnerable to which stereotypes? Future research should also include more longitudinal analyses to understand these effects in a dynamic, nuanced way. Furthermore, such work could be enhanced by considering the role of development itself when formulating research questions and hypotheses. Doing so might include examining the developmental skills (e.g., physical, socioemotional, and cognitive milestones) present at each point in development or incorporating the developmental experiences under way for participants (e.g., puberty). For example, because the onset of puberty leads to changes in body, brain, and social interactions (e.g., Berenbaum et al. 2015), some scholars have investigated the role of pubertal development and pubertal timing in shaping processes undergirding children’s media internalization (Rousseau et al. 2020). Such rationales could be expanded to other areas of study described in this review, including the potential contributions

of physical development in shaping girls' engagement with sexualizing content or contributions of cognitive development to children's susceptibility to prominent media messages. It would also be useful to extend research on certain gender beliefs to other ages. For example, all of the work on media and gendered play activities has focused on young children and on toy play. How might media use contribute to the activities and choices of tweens and adolescents, populations that may have even more agency over their free time and choices? For example, how does media use contribute to their choice of after-school activities (e.g., cheerleading versus robotics) and to academic course and career aspirations?

Incorporating the Role of Race and Intersectional Identities

Researchers looking to move this field forward must consider doing further work with participants from diverse racial backgrounds. Only a few studies reported here explicitly investigated media effects among youth of color (e.g., Anyiwo et al. 2018, Rivadeneyra & Ward 2005); future research should build on these studies in several ways. First, scholars should consider that youth of color may be consuming both mainstream media and media directed toward their own demographic, the content of which may differ substantially from that of mainstream media. Second, youth of color may confront not only traditional gender stereotypes but also race-specific gender stereotypes (e.g., Ghavami & Peplau 2012), including the stereotype of the nerdy Asian man or the feisty Latina. Finally, researchers could expand their efforts by taking an intersectional approach to their work (Crenshaw 1989). Intersectionality is a framework of inquiry that considers how different systems of privilege and oppression shape individuals' lived experience on the basis of their multiple, intersecting identities (e.g., age, sex, race, sexual orientation) (McCormick-Huhn et al. 2019). Examples of more intersectional approaches to media effects research can be found in recent studies conducted among adults. Some of this research is qualitative, including a recent study by Goodwill et al. (2019), who interviewed Black men on their use of media models to construct a healthy sense of masculinity, given that many portrayals are problematic. Other research is quantitative. For example, several scholars have examined whether media use contributes to specific racialized gender stereotypes about Black women, including the stereotype of the hypersexual Jezebel and the strong Black woman. In their analyses of the contributions of social media (Stanton et al. 2017) or traditional media (Jerald et al. 2017) to these stereotypes, these scholars also incorporated potential demographic moderators (e.g., ethnic identity), acknowledging that Black women are not monolithic and that diverse aspects of their identities will shape their media response. These approaches need to be extended to children and adolescents.

Testing Additional Viewing Cognitions as Direct Predictors and Mediators

Another avenue for future research would be more directed study of potential cognitive mechanisms and mediators. A majority of the studies reviewed assessed media exposure either by testing everyday exposure amounts or by exposing participants to particular media content. Yet several theoretical models, including social cognitive theory (Bandura 2001) and uses and gratifications models (e.g., Rubin 1994), argue that other cognitions are involved in media effects, working either as direct predictors or as mediators or moderators. Prominent examples include viewers' perceptions of the realism of the portrayals, their level of identification with the characters, their motives for selecting certain content, and the degree of attention and critique applied during viewing. Indeed, there is evidence among adults that such cognitive mechanisms are influential. For example, researchers who have examined contributions of both exposure and perceived realism to diverse beliefs have found the effects of perceived realism to be stronger than those of exposure (e.g., Behm-Morawitz et al. 2016, Ferris et al. 2007, Lippman et al. 2014, Martins & Jensen

2014, Seabrook et al. 2017, Ward 2002). Researchers need to continue to test additional cognitive mechanisms as potential predictors and moderators of media's contributions to young people's gender beliefs.

Integrating Other Socialization Forces

For most of the studies discussed in this review, media use was examined in isolation from other gender socialization forces. However, in order to better understand how media contributions to gender socialization compare with other contributions, such as messages from parents or the modeling of peers, we need to begin to examine these forces within the same study. How do the contributions compare and interact? Might media contributions be especially influential for participants who do not get strong gender messages from parents or friends? How do youth negotiate competing or conflicting messages?

One model to follow may be that of McAuslan et al. (2018), who modeled forces contributing to emerging adults' attitudes toward dating violence. Their model includes supportive family relationships, peer support of aggression, and several media variables. Similarly, in their investigation of socialization forces contributing to girls' self-objectification, Slater & Tiggemann (2015) included measures of traditional media use, social media use, girls' participation in 11 extracurricular activities, and girls' exposure to negative and positive appearance-related comments from others. Comparing these forces in the same structural equation model allowed the authors to demonstrate that the contributions of traditional or social media use to self-objectification were comparable to those of appearance-related comments. Continued efforts to bring in other socialization forces are needed to complete the picture and to contextualize media contributions.

Expanding Work on Boys and Young Men

Because existing research has frequently focused on stereotypical portrayals of girls and women, there has been less attention paid to boys and men, both as media characters and as research participants. Portrayals in mainstream media often link masculinity with power and dominance, aggression, sexual prowess, status, emotional restraint, heterosexuality, and risk taking (for a review, see Scharer 2014). How does regular exposure to this content contribute to boys' expectations of what makes a man? This question has received some examination among undergraduate men, with survey data linking greater consumption of television, reality television, movies, sitcoms, or sports video games with greater support for traditional masculinity or traditional sexual roles and scripts (e.g., Ferris et al. 2007; Giaccardi et al. 2016; Gilbert et al. 2018; Scharer & Blackburn 2018; Seabrook et al. 2017; Ward et al. 2006, 2011; Zurbriggen & Morgan 2006). However, we have seen little testing of this question among boys. Also relevant are the potential contributions of media use to shaping boys' assumptions about women and femininity. Some research has linked boys' exposure to sexually objectifying media to their holding objectifying and sexualizing views of women (e.g., Rousseau & Eggermont 2018, Ward et al. 2015). However, more analysis is needed concerning media use and boys' views of women and femininity more broadly.

Attending to Social Media

Another area deserving further attention in this field is the impact of social media. Although excluded from this review, social media remain an important part of adolescents' media diets, with 70% of adolescents reporting that they use social media multiple times a day (Rideout & Robb 2018), primarily Snapchat, Instagram, and Facebook. Several studies have sought to examine how

gender roles play out on social media and how social media cultivate certain gender beliefs (e.g., Alvares 2018). There are many potential pathways. Social media sites such as Twitter and Facebook could potentially reproduce problematic gender dynamics via both the personal performance of gender and the policing of others' posts on these sites; however, these sites could also provide a platform for critical scrutiny and resistance, because the content is user created (Greenwood 2016). Current research has begun to examine both the gender-related content and its implications for users' gender beliefs. For example, studies have examined the nature of gendered criticism in YouTube comments (Döring & Mohseni 2019), gender dynamics using hashtags (Lutzky & Lawson 2019), and gendered self-expression through profile pictures and other photo-based social media sites such as Instagram (Butkowski et al. 2020). It would be beneficial for future research to assess both the general features of social media that may differentiate their effects from those of traditional screen media and the unique features of different platforms that may add nuance to these contributions.

Attending to “Positive” Portrayals and Counterstereotypes

Because most existing analyses of gender beliefs have focused on negative gender stereotypes, so does the research that we reviewed. However, this emphasis in the field does not mean that media content is solely stereotypical and can only exacerbate negative and limiting gender notions. Accordingly, there needs to be greater attention to portrayals that depict women and men in three-dimensional ways and/or as equals. How prevalent is this content? Does regular exposure to this content impede the internalization of gender stereotypes? We must also acknowledge that the descriptors “positive” and “negative” are subjective and relative; indeed, it is likely that for some cultural or religious subgroups, the media's mainstream depictions may be more progressive than the messages received from adults within the subgroup (Scharrer 2012). Research also needs to attend to nontraditional or counterstereotypical portrayals that feature women as strong, powerful leaders and boys and men as emotional and nurturant. Earlier research did examine the impact of everyday exposure to specific counterstereotypical content (e.g., Aubrey & Harrison 2004), and this approach should be continued. There is also experimental evidence among adults demonstrating that deliberate exposure to positive gender messages can shift attitudes. For example, undergraduates exposed to pro-gender equality music lyrics expressed more positive attitudes and behavior toward women than students without this exposure (Greitemeyer et al. 2015). It would be beneficial to expand this type of work to adolescent populations and to other forms of media content.

Continued study of the potential of media literacy campaigns to help youth combat media stereotypes is also needed. These interventions usually take the form of several classroom sessions that introduce children and adolescents to the topic of gender stereotypes and help them learn to identify these stereotypes in the media, construct counterexamples of the stereotypes, and think critically about why media prescribe these limiting norms for women and men (e.g., Puchner et al. 2015). These interventions have cut across genres to look at television, the internet, social media, and magazines, and have generally shown at least short-term effects of the intervention. For example, a study by Liao et al. (2020) examined the role of a media literacy intervention focused on so-called idol dramas among a sample of 248 14- and 15-year-olds. Results demonstrated that engagement with the intervention led to an increase in participants' ability to understand, analyze, and respond to media messages, and reduced their overall traditional gender role attitudes. Yet these studies also reveal limitations. In one study, adolescents in grades 7 and 8 who participated in a similarly structured intervention were able to recognize stereotypes in media but downplayed the effect of media on their occupational choices and were less likely to identify the problematic

effects of negative stereotypes for their own gender compared with the other gender (Puchner et al. 2015). Future research should seek to understand which media interventions are most effective, and document how counterstereotypical content can be utilized to encourage children and adolescents to be more critical media consumers.

CONCLUSION

The goal of this review has been to present current findings concerning media's contributions to the development of gender stereotypes among children and adolescents. Modern media expose youth to distorted depictions of gender norms, and youth consume these media (traditional and social) for nearly 8 hours a day. Although these dynamics suggest that media would be critical gender socializers, we still know surprisingly little about how media use shapes children's and adolescents' gender beliefs and assumptions. The studies presented here show some evidence that media use contributes to traditional gender role attitudes, appearance beliefs and sexualization, toy and play behavior, sexual roles and courtship behavior, and occupational aspirations and academic performance. We have also offered many avenues for future research, particularly research that incorporates newer theories, other socialization forces, and egalitarian portrayals and that attends to boys, youth of color, and critical developmental milestones. We hope that the findings and analyses provided here will offer fuel for continued research on this omnipresent and evolving cultural force.

DISCLOSURE STATEMENT

The authors are not aware of any affiliations, memberships, funding, or financial holdings that might be perceived as affecting the objectivity of this review.

LITERATURE CITED

- Alvares C. 2018. Online staging of femininity: disciplining through public exposure in Brazilian social media. *Fem. Media Stud.* 18:657–74
- Anyiwo N, Ward LM, Day Fletcher K, Rowley S. 2018. Black adolescents' television usage and endorsement of mainstream gender roles and the strong Black woman schema. *J. Black Psychol.* 44:371–97
- Aubrey JS, Frisby CM. 2011. Sexual objectification in music videos: a content analysis comparing gender and genre. *Mass Commun. Soc.* 14:475–501
- Aubrey JS, Harrison K. 2004. The gender-role content of children's favorite television programs and its links to their gender-related perceptions. *Media Psychol.* 5:111–46
- Aubrey JS, Yan K, Terán L, Roberts L. 2019. The heterosexual script on tween, teen, and young-adult television programs: a content analytic update and extension. *J. Sex Res.* In press. <https://doi.org/10.1080/00224499.2019.1699895>
- Baker K, Raney AA. 2007. Equally super? Gender-role stereotyping of superheroes in children's animated programs. *Mass Commun. Soc.* 10:25–41
- Bandura A. 2001. Social cognitive theory of mass communication. *Media Psychol.* 3:265–99
- Behm-Morawitz E, Lewallen J, Miller B. 2016. Real mean girls? Reality television viewing, social aggression, and gender-related beliefs among female emerging adults. *Psychol. Pop. Media Cult.* 5:340–55
- Berenbaum SA, Beltz AM, Corley R. 2015. The importance of puberty for adolescent development: conceptualization and measurement. *Adv. Child Dev. Behav.* 48:53–92
- Bleakley A, Hennessy M, Fishbein M. 2011. A model of adolescents' seeking of sexual content in their media choices. *J. Sex Res.* 48:309–15
- Bobkowski PS. 2009. Adolescent religiosity and selective exposure to television. *J. Media Relig.* 8:55–70
- Bond BJ. 2016. Fairy godmothers > robots: the influence of televised gender stereotypes and counter-stereotypes on girls' perceptions of STEM. *Bull. Sci. Technol. Soc.* 36:91–97

- Brown CS. 2019. Sexualized gender stereotypes predict girls' academic self-efficacy and motivation across middle school. *Int. J. Behav. Dev.* 43:523-29
- Brown JD, Halpern CT, L'Engle KL. 2005. Mass media as a sexual super peer for early maturing girls. *J. Adolesc. Health* 36:420-427
- Brown JD, Pardun CJ. 2004. Little in common: racial and gender differences in adolescents' television diets. *J. Broadcast. Electron. Media* 48:266-78
- Butkowski CP, Dixon TL, Weeks KR, Smith MA. 2020. Quantifying the feminine self(ie): gender display and social media feedback in young women's Instagram selfies. *New Media Soc.* 22:817-37
- Chang F, Luo M, Walton G, Aguilar L, Bailenson J. 2019. Stereotype threat in virtual learning environments: effects of avatar gender and sexist behavior on women's math learning outcomes. *Cyberpsychol. Behav. Soc. Netw.* 22:634-40
- Coyne SM, Linder JR, Rasmussen EE, Nelson DA, Birkbeck V. 2016. Pretty as a princess: longitudinal effects of engagement with Disney princesses on gender stereotypes, body esteem, and prosocial behavior in children. *Child Dev.* 87:1909-25
- Coyne SM, Linder JR, Rasmussen EE, Nelson DA, Collier KM. 2014. It's a bird! It's a plane! It's a gender stereotype! Longitudinal associations between superhero viewing and gender stereotyped play. *Sex Roles* 70:416-30
- Coyne SM, Padilla-Walker L, Holmgren H, Davis E, Collier K, et al. 2018. A meta-analysis of prosocial media on prosocial behavior, aggression, and empathic concern: a multidimensional approach. *Dev. Psychol.* 54:331-47
- Crenshaw K. 1989. Demarginalizing the intersection of race and sex: a Black feminist critique of antidiscrimination doctrine, feminist theory and antiracist politics. *Univ. Chicago Leg. Forum* 140:139-67
- Curtin N, Ward LM, Merriwether A, Caruthers A. 2011. Femininity ideology and sexual health in young women: a focus on sexual knowledge, embodiment, and agency. *Int. J. Sex. Health* 23:48-62
- Davies PG, Spencer SJ, Quinn DM, Gerhardstein R. 2002. Consuming images: how television commercials that elicit stereotype threat can restrain women academically and professionally. *Personal. Soc. Psychol. Bull.* 28:1615-28
- Davies PG, Spencer SJ, Steele CM. 2005. Clearing the air: Identity safety moderates the effects of stereotype threat on women's leadership aspirations. *J. Personal. Soc. Psychol.* 88:276-87
- Döring N, Mohseni MR. 2019. Fail videos and related video comments on YouTube: a case of sexualization of women and gendered hate speech? *Commun. Res. Rep.* 36:254-64
- Driesmans K, Vandenbosch L, Eggermont S. 2015. Playing a videogame with a sexualized female character increases adolescents' rape myth acceptance and tolerance toward sexual harassment. *Games Health J.* 4:91-94
- Driesmans K, Vandenbosch L, Eggermont S. 2016. True love lasts forever: the influence of a popular teenage movie on Belgian girls' romantic beliefs. *J. Child. Media* 10:304-20
- Eisend M. 2010. A meta-analysis of gender roles in advertising. *J. Acad. Mark. Sci.* 38:418-40
- England DE, Descartes L, Collier-Meek MA. 2011. Gender role portrayal and the Disney princesses. *Sex Roles* 64:555-67
- Ex CT, Janssens JM, Korzilius HP. 2002. Young females' images of motherhood in relation to television viewing. *J. Commun.* 52:955-71
- Ferris AL, Smith SW, Greenberg BS, Smith SL. 2007. The content of reality dating shows and viewer perceptions of dating. *J. Commun.* 57:490-510
- Fredrickson BL, Roberts TA. 1997. Objectification theory: toward understanding women's lived experiences and mental health risks. *Psychol. Women Q.* 21:173-206
- Gabbiadini A, Riva P, Andrighetto L, Volpato C, Bushman BJ. 2016. Acting like a tough guy: violent-sexist video games, identification with game characters, masculine beliefs, & empathy for female violence victims. *PLOS ONE* 11:e0152121
- Galambos NL, Petersen AC, Richards M, Gitelson IB. 1985. The Attitudes Toward Women Scale for Adolescents (AWSA): a study of reliability and validity. *Sex Roles* 13:343-56
- Gerbner G. 1998. Cultivation analysis: an overview. *Mass Commun. Soc.* 1:175-94
- Gerding A, Signorielli N. 2014. Gender roles in tween television programming: a content analysis of two genres. *Sex Roles* 70:43-56

- Ghavami N, Peplau L. 2012. An intersectional analysis of gender and ethnic stereotypes. *Psychol. Women Q.* 37:113–27
- Giaccardi S, Heldman C, Cooper R, Cooper-Jones N, Conroy M, et al. 2019. *See Jane 2019: historic gender parity in children's television*. Rep., Geena Davis Inst. Gend. Media, Mount Saint Mary's Univ., Los Angeles, CA
- Giaccardi S, Ward LM, Seabrook RC, Manago A, Lippman J. 2016. Media and modern manhood: testing associations between media consumption and young men's acceptance of traditional gender ideologies. *Sex Roles* 75:151–63
- Giaccardi S, Ward LM, Seabrook RC, Manago A, Lippman J. 2017. Media use and men's risk behavior: examining the role of masculinity ideology. *Sex Roles* 77:581–92
- Gilbert MA, Giaccardi S, Ward LM. 2018. Contributions of game genre and masculinity ideologies to associations between video game play and men's risk-taking behavior. *Media Psychol.* 21:437–56
- Gilpatric K. 2010. Violent female action characters in contemporary American cinema. *Sex Roles* 62:734–46
- Goodwill JR, Anyiwo N, Williams E-DG, Johnson NC, Mattis JS, Watkins DC. 2019. Media representations of popular culture figures and the construction of Black masculinities. *Psychol. Men Masc.* 20:288–98
- Gordon MK. 2008. Media contributions to African American girls' focus on beauty and appearance: exploring the consequences of sexual objectification. *Psychol. Women Q.* 32:245–56
- Grabe S, Hyde JS. 2009. Body objectification, MTV, and psychological outcomes among female adolescents. *J. Appl. Soc. Psychol.* 39:2840–58
- Grabe S, Ward LM, Hyde JS. 2008. The role of the media in body image concerns among women: a meta-analysis of experimental and correlational studies. *Psychol. Bull.* 134:460–76
- Greenwood D. 2016. Gender considerations of media content, uses, and impact on well-being. In *The Routledge Handbook of Media Use and Well-Being: International Perspectives on Theory and Research on Positive Media Effects*, ed. L Reinecke, MB Oliver, pp. 396–408. New York: Routledge/Taylor & Francis
- Greitemeyer T, Hollingdale J, Traut-Mattausch E. 2015. Changing the track in music and misogyny: Listening to music with pro-equality lyrics improves attitudes and behavior toward women. *Psychol. Pop. Media Cult.* 4:56–67
- Greitemeyer T, Mügge DO. 2014. Video games do affect social outcomes: a meta-analytic review of the effects of violent and prosocial video game play. *Personal. Soc. Psychol. Bull.* 40:578–89
- Hawk ST, Vanwesenbeeck I, De Graaf H, Bakker F. 2006. Adolescents' contact with sexuality in mainstream media: a selection-based perspective. *J. Sex Res.* 43:352–63
- Hawkins I, Ratan R, Blair D, Fordham J. 2019. The effects of gender role stereotypes in digital learning games on motivation for STEM achievement. *J. Sci. Educ. Technol.* 28:628–37
- Hentges B, Case K. 2013. Gender representations on Disney Channel, Cartoon Network, and Nickelodeon broadcasts in the United States. *J. Child. Media* 7:319–33
- Herrett-Skjellum J, Allen M. 1996. Television programming and sex stereotyping: a meta-analysis. *Ann. Int. Commun. Assoc.* 19:157–86
- Jerald M, Ward LM, Moss L, Thomas K, Fletcher KD. 2017. Subordinates, sex objects, or sapphires? Investigating contributions of media use to Black students' femininity ideologies and stereotypes about Black women. *J. Black Psychol.* 43:608–35
- Johar G, Moreau P, Schwarz N. 2003. Gender typed advertisements and impression formation: the role of chronic and temporary accessibility. *J. Consum. Psychol.* 13:220–29
- Kahlenberg SG, Hein MM. 2010. Progression on Nickelodeon? Gender-role stereotypes in toy commercials. *Sex Roles* 62:830–47
- Kim JL, Collins RL, Kanouse DE, Elliot MN, Berry SH, et al. 2006. Sexual readiness, household policies, and other predictors of adolescents' exposure to sexual content in mainstream entertainment television. *Media Psychol.* 8:449–71
- Kim JL, Sorsoli CL, Collins K, Zylbergold BA, Schooler D, et al. 2007. From sex to sexuality: exposing the heterosexual script on primetime network television. *J. Sex Res.* 44:145–57
- Kirsch AC, Murnen SK. 2015. "Hot" girls and "cool dudes": examining the prevalence of the heterosexual script in American children's television media. *Psychol. Pop. Media Cult.* 4:18–30
- Lauzen MM, Dozier DM, Horan N. 2008. Constructing gender stereotypes through social roles in prime-time television. *J. Broadcast. Electron. Media* 52:200–14

- Leaper C. 2015. Gender and social-cognitive development. In *Handbook of Child Psychology and Developmental Science*, Vol 2: *Cognitive Processes*, ed. RM Lerner, LS Liben, U Müller, pp. 806–53. New York: Wiley. 7th ed.
- Leaper C, Breed L, Hoffman L, Perlman CA. 2002. Variations in the gender-stereotyped content of children's television cartoons across genres. *J. Appl. Soc. Psychol.* 32:1653–62
- Liao LL, Chang LC, Lee CK, Tsai SY. 2020. The effects of a television drama-based media literacy initiative on Taiwanese adolescents' gender role attitudes. *Sex Roles* 82:219–31
- Lippman JR, Ward LM, Seabrook RC. 2014. Isn't it romantic? Differential associations between romantic screen media genres and romantic beliefs. *Psychol. Pop. Media Cult.* 3:128–40
- Lutzky U, Lawson R. 2019. Gender politics and discourses of #mansplaining, #manspreading, and #manterruption on Twitter. *Soc. Media Soc.* 5. <https://doi.org/10.1177/2056305119861807>
- Martin R. 2017. Gender and emotion stereotypes in children's television. *J. Broadcast. Electron. Media* 61:499–517
- Martins N, Jensen RE. 2014. The relationship between “Teen Mom” reality programming and teenagers' beliefs about teen parenthood. *Mass Commun. Soc.* 17:830–52
- Matthes J, Prieler M, Adam K. 2016. Gender-role portrayals in television advertising across the globe. *Sex Roles* 75:314–27
- McAuslan P, Leonard M, Pickett T. 2018. Using the media practice model to examine dating violence in emerging adults. *Psychol. Pop. Media Cult.* 7:429–49
- McCormick-Huhn K, Warner LR, Settles IH, Shields SA. 2019. What if psychology took intersectionality seriously? Changing how psychologists think about participants. *Psychol. Women Q.* 43:445–56
- McDade-Montez E, Wallander J, Cameron L. 2017. Sexualization in US Latina and White girls' preferred children's television programs. *Sex Roles* 77:1–15
- Miller A, Kinnally W, Maleche H, Booker NA. 2017. The relationship between Nairobi adolescents' media use and their sexual beliefs and attitudes. *Afr. J. AIDS Res.* 16:129–36
- Morgan M, Shanahan J. 1997. Two decades of cultivation research: an appraisal and meta-analysis. *Ann. Int. Commun. Assoc.* 20:1–45
- Murnen S, Wright C, Kaluzny G. 2002. If “boys will be boys,” then girls will be victims? A meta-analytic review of the research that relates masculine ideology to sexual aggression. *Sex Roles* 46:359–75
- Oppliger PA. 2007. Effects of gender stereotyping on socialization. In *Mass Media Effects Research: Advances Through Meta-Analysis*, ed. RW Preiss, BM Gayle, N Burrell, M Allen, J Bryant, pp. 199–214. New York: Routledge
- Pacilli MG, Tomasetto C, Cadinu M. 2016. Exposure to sexualized advertisements disrupts children's math performance by reducing working memory. *Sex Roles* 74:389–98
- Padilla-Walker LM, Coyne SM, Fraser AM, Stockdale LA. 2013. Is Disney the nicest place on earth? A content analysis of prosocial behavior in animated Disney films. *J. Commun.* 63:393–412
- Perry D, Pauletti R. 2011. Gender and adolescent development. *J. Res. Adolesc.* 21:61–74
- Peter J, Valkenburg PM. 2007. Adolescents' exposure to a sexualized media environment and their notions of women as sex objects. *Sex Roles* 56:381–95
- Pike JJ, Jennings NA. 2005. The effects of commercials on children's perceptions of gender appropriate toy use. *Sex Roles* 52:83–91
- Pleck J, Sonenstein F, Ku L. 1993. Masculinity ideology and its correlates. In *Gender Issues in Social Psychology*, ed. S Oskamp, M Costanzo, pp. 85–110. Newbury Park, CA: SAGE
- Polo-Alonso C, Vangeel L, Vandenbosch L. 2018. Effects of stereotypical sex role movies on adolescents and emerging adults. *Commun. Gén.* 1:127–45
- Potter WJ. 2014. A critical analysis of cultivation theory. *J. Commun.* 64:1015–36
- Puchner L, Markowitz L, Hedley M. 2015. Critical media literacy and gender: teaching middle school students about gender stereotypes and occupations. *J. Media Lit. Educ.* 7:23–34
- Rideout VJ, Robb MB. 2018. *Social Media, Social Life: Teens Reveal Their Experiences*. San Francisco: Common Sense
- Rideout VJ, Robb MB. 2019. *The Common Sense Census: Media Use by Tweens and Teens*. San Francisco: Common Sense

- Rivadeneyra R, Ward LM. 2005. From Ally McBeal to Sábado Gigante: contributions of television viewing to the gender role attitudes of Latino adolescents. *J. Adolesc. Res.* 20:453–75
- Robinson T, Church S, Callahan C, Madsen M, Pollock L. 2020. Virtue, royalty, dreams and power: exploring the appeal of Disney Princesses to preadolescent girls in the United States. *J. Child. Media*. In press. <https://doi.org/10.1080/17482798.2020.1711787>
- Rosenwasser SM, Lingenfelter M, Harrington AF. 1989. Nontraditional gender role portrayals on television and children's gender role perceptions. *J. Appl. Dev. Psychol.* 10:97–105
- Rousseau A, Eggermont S. 2018. Television and preadolescents' objectified dating script: consequences for self- and interpersonal objectification. *Mass Commun. Soc.* 21:71–93
- Rousseau A, Eggermont S, Bels A, Van den Bulck H. 2018. Separating the sex from the object: conceptualizing sexualization and (sexual) objectification in Flemish preteens' popular television programs. *J. Child. Media* 12:346–65
- Rousseau A, Laporte H, Grundmann F, Eggermont S. 2020. The role of pubertal timing and heterosocial involvement in early adolescents' media internalization: a moderated moderation analysis. *J. Early Adolesc.* 40:1167–94
- Rousseau A, Rodgers RF, Eggermont S. 2019. A short-term longitudinal exploration of the impact of TV exposure on objectifying attitudes toward women in early adolescent boys. *Sex Roles* 80:186–99
- Rubin AM. 1994. Media uses and effects: a uses-and-gratifications perspective. In *Media Effects: Advances in Theory and Research*, ed. A Bandura, J Bryant, D Zillmann, pp. 417–36. Mahwah, NJ: Erlbaum
- Ruble DN, Martin CL, Berenbaum SA. 2006. Gender development. In *Handbook of Child Psychology*, Vol. 3: *Social, Emotional, and Personality Development*, ed. W Damon, R Lerner, pp. 858–932. New York: Wiley. 6th ed.
- Santana M, Raj A, Decker M, Marche AL, Silverman J. 2006. Masculine gender roles associated with increased sexual risk and intimate partner violence perpetration among young adult men. *J. Urban Health* 83:575–85
- Scharrer E. 2012. Television and gender roles: cultivating conceptions of self and others. In *Living with Television Now: Advances in Cultivation Theory and Research*, ed. M Morgan, J Shanahan, N Signorielli, pp. 81–100. New York: Lang
- Scharrer E. 2014. Representations of gender in the media. In *The Oxford Handbook of Media Psychology*, ed. K Dill, pp. 267–84. Oxford, UK: Oxford Univ. Press
- Scharrer E, Blackburn G. 2018. Cultivating conceptions of masculinity: television and perceptions of masculine gender role norms. *Mass Commun. Soc.* 21:149–77
- Scharrer E, Kim DD, Lin KM, Liu Z. 2006. Working hard or hardly working? Gender, humor, and the performance of domestic chores in television commercials. *Mass Commun. Soc.* 9:215–38
- Schmader T, Johns M, Forbes C. 2008. An integrated process model of stereotype threat effects on performance. *Psychol. Rev.* 115:336–56
- Schooler D, Sorsoli CL, Kim JL, Tolman DL. 2009. Beyond exposure: a person-oriented approach to adolescent media diets. *J. Res. Adolesc.* 19:484–508
- Seabrook RC, Ward LM, Cortina LM, Giaccardi S, Lippman JR. 2017. Girl power or powerless girl? Television, sexual scripts, and sexual agency in sexually active young women. *Psychol. Women Q.* 41:240–53
- Shrum LJ. 2009. Television viewing and social reality: effects and underlying processes. In *Social Psychology of Consumer Behavior*, ed. M Wanke, pp. 251–72. New York: Psychology
- Shrum LJ, Lee J. 2012. The stories TV tells: how fictional TV narratives shape normative perceptions and personal values. In *The Psychology of Entertainment Media: Blurring the Lines Between Entertainment and Persuasion*, ed. LJ Shum, pp. 147–67. New York: Routledge/Taylor & Francis. 2nd ed.
- Signorielli N. 2012. Gender stereotyping on television. In *Media Psychology*, ed. G Brewer, pp. 170–86. New York: Palgrave Macmillan
- Simon S, Hoyt CL. 2013. Exploring the effect of media images on women's leadership self-perceptions and aspirations. *Group Process. Intergroup Relat.* 16:232–45
- Sink A, Mastro D. 2017. Depictions of gender on primetime television: a quantitative content analysis. *Mass Commun. Soc.* 20:3–22

- Slater A, Halliwell E, Jarman H, Gaskin E. 2017. More than just child's play? An experimental investigation of the impact of an appearance-focused internet game on body image and career aspirations of young girls. *J. Youth Adolesc.* 46:2047-59
- Slater A, Tiggemann M. 2015. Media exposure, extracurricular activities, and appearance-related comments as predictors of female adolescents' self-objectification. *Psychol. Women Q.* 39:375-89
- Slater A, Tiggemann M. 2016. Little girls in a grown-up world: exposure to sexualized media, internalization of sexualization messages, and body image in 6-9 year-old girls. *Body Image* 18:19-22
- Smith SL, Choueiti M, Pieper K. 2014. *Gender bias without borders: an investigation of female characters in popular films across 11 countries*. Rep., Geena Davis Inst. Gend. Media, Mount Saint Mary's Univ., Los Angeles, CA
- Smith SL, Choueiti M, Prescott A, Pieper KM. 2013. *Gender roles and occupations: a look at character attributes and job-related aspirations in film and television*. Rep., Geena Davis Inst. Gend. Media, Mount Saint Mary's Univ., Los Angeles, CA. <https://seejane.org/wp-content/uploads/key-findings-gender-roles-2013.pdf>
- Smith SL, Pieper KM, Granados A, Choueiti M. 2010. Assessing gender-related portrayals in top-grossing G-rated films. *Sex Roles* 62:774-86
- Spencer S, Logel C, Davies P. 2016. Stereotype threat. *Annu. Rev. Psychol.* 67:415-37
- Spinner L, Cameron L, Calogero R. 2018. Peer toy play as a gateway to children's gender flexibility: the effect of (counter)stereotypic portrayals of peers in children's magazines. *Sex Roles* 79:314-28
- Stanton A, Jerald M, Ward LM, Avery L. 2017. Social media contributions to strong Black woman ideal endorsement and Black women's mental health. *Psychol. Women Q.* 41:465-78
- Starr CR, Ferguson GM. 2012. Sexy dolls, sexy grade-schoolers? Media and maternal influences on young girls' self-sexualization. *Sex Roles* 67:463-76
- Steele CM, Aronson J. 1995. Stereotype threat and the intellectual test performance of African Americans. *J. Personal. Soc. Psychol.* 69:797-811
- Steele JR, Brown JD. 1995. Adolescent room culture: studying media in the context of everyday life. *J. Youth Adolesc.* 24:551-76
- Stone EA, Brown CS, Jewell JA. 2015. The sexualized girl: a within-gender stereotype among elementary school children. *Child Dev.* 86:1604-22
- ter Bogt TF, Engels RC, Bogers S, Kloosterman M. 2010. "Shake it baby, shake it": media preferences, sexual attitudes and gender stereotypes among adolescents. *Sex Roles* 63:844-59
- Tolman DL, Impett EA, Tracy AJ, Michael A. 2006. Looking good, sounding good: femininity ideology and adolescent girls' mental health. *Psychol. Women Q.* 30:85-95
- Trekels J, Eggermont S. 2017a. Aspiring to have the looks of a celebrity: young girls' engagement in appearance management behaviors. *Eur. J. Pediatr.* 176:857-63
- Trekels J, Eggermont S. 2017b. Beauty is good: the appearance culture, the internalization of appearance ideals, and dysfunctional appearance beliefs among tweens. *Hum. Commun. Res.* 43:173-92
- Van Loo KJ, Rydell RJ. 2014. Negative exposure: Watching another woman subjected to dominant male behavior during a math interaction can induce stereotype threat. *Soc. Psychol. Personal. Sci.* 5:601-7
- van Oosten JM, Peter J, Valkenburg PM. 2015. The influence of sexual music videos on adolescents' misogynistic beliefs: the role of video content, gender, and affective engagement. *Commun. Res.* 42:986-1008
- Vandenbosch L, Eggermont S. 2011. *Temptation Island, The Bachelor, Joe Millionaire*: a prospective cohort study on the role of romantically themed reality television in adolescents' sexual development. *J. Broadcast. Electron. Media* 55:563-80
- Vandenbosch L, Eggermont S. 2012. Maternal attachment and television viewing in adolescents' sexual socialization: differential associations across gender. *Sex Roles* 66:38-52
- Wallis C. 2011. Performing gender: a content analysis of gender display in music videos. *Sex Roles* 64:160-72
- Walsh A, Leaper C. 2020. A content analysis of gender representations in preschool children's television. *Mass Commun. Soc.* 23:331-55
- Ward LM. 2002. Does television exposure affect emerging adults' attitudes and assumption about sexual relationships? Correlational and experimental confirmation. *J. Youth Adolesc.* 31:1-15
- Ward LM. 2016. Media and sexualization: state of empirical research, 1995-2015. *J. Sex Res.* 53:560-77

- Ward LM, Epstein M, Caruthers A, Merriwether A. 2011. Men's media use, sexual cognitions, and sexual risk behavior: testing a mediational model. *Dev. Psychol.* 47:592–602
- Ward LM, Friedman K. 2006. Using TV as a guide: associations between television viewing and adolescents' sexual attitudes and behavior. *J. Res. Adolesc.* 16:133–56
- Ward LM, Hansbrough E, Walker E. 2005. Contributions of music video exposure to black adolescents' gender and sexual schemas. *J. Adolesc. Res.* 20:143–66
- Ward LM, Merriwether A, Caruthers A. 2006. Breasts are for men: media, masculinity ideologies, and men's beliefs about women's bodies. *Sex Roles* 55:703–14
- Ward LM, Rivadeneyra R, Thomas K, Day K, Epstein M. 2013. A woman's worth: analyzing the sexual objectification of Black women in music videos. In *The Sexualization of Girls and Girlhood: Causes, Consequences, and Resistance*, ed. EL Zurbriggen, TA Roberts, pp. 39–62. Oxford, UK: Oxford Univ. Press
- Ward LM, Vandenbosch L, Eggermont S. 2015. The impact of men's magazines on adolescent boys' objectification and courtship beliefs. *J. Adolesc.* 39:49–58
- Wille E, Gaspard H, Trautwein U, Oschatz K, Scheiter K, Nagengast B. 2018. Gender stereotypes in a children's television program: effects on girls' and boys' stereotype endorsement, math performance, motivational dispositions, and attitudes. *Front. Psychol.* 9:2435
- Wong Y, Ho M, Wang S, Miller ISK. 2017. Meta-analyses of the relationship between conformity to masculine norms and mental health-related outcomes. *J. Couns. Psychol.* 64:80–93
- Wroblewski R, Huston AC. 1987. Televised occupational stereotypes and their effects on early adolescents: Are they changing? *J. Early Adolesc.* 7:283–97
- Ziegler A, Stoeger H. 2008. Effects of role models from films on short-term ratings of intent, interest, and self-assessment of ability by high school youth: a study of gender-stereotyped academic subjects. *Psychol. Rep.* 102:509–31
- Zurbriggen EL, Collins RL, Lamb S, Roberts RA, Tolman DL, et al. (Am. Psychol. Assoc. Task Force Sex. Girls). 2007. *Report of the APA Task Force on the Sexualization of Girls*. Washington, DC: Am. Psychol. Assoc.
- Zurbriggen EL, Morgan EM. 2006. Who wants to marry a millionaire? Reality dating television programs, attitudes toward sex, and sexual behaviors. *Sex Roles* 54:1–17



Contents

It's More Complicated <i>Arnold J. Sameroff</i>	1
Children's Socioemotional Development Across Cultures <i>Heidi Keller</i>	27
Bilingual Acquisition: The Early Steps <i>Nuria Sebastian-Galles and Chiara Santolin</i>	47
Children and Screens <i>Brenna Hassinger-Das, Sarah Brennan, Rebecca A. Dore, Roberta Michnick Golinkoff, and Kathy Hirsh-Pasek</i>	69
The Social Function of Imitation in Development <i>Harriet Over</i>	93
Developing an Understanding of Science <i>Andrew Shtulman and Caren Walker</i>	111
Toward Realizing the Promise of Educational Neuroscience: Improving Experimental Design in Developmental Cognitive Neuroscience Studies <i>Usha Goswami</i>	133
Knowing What Others Think and Feel: Empathic Accuracy Across Adulthood <i>Michaela Riediger and Elisabeth S. Blanke</i>	157
Media and the Development of Gender Role Stereotypes <i>L. Monique Ward and Petal Grower</i>	177
Language Development in Context <i>Meredith L. Rowe and Adriana Weisleder</i>	201
The Origins of Social Knowledge in Altricial Species <i>Katerina M. Faust, Samantha Carouso-Peck, Mary R. Elson, and Michael H. Goldstein</i>	225

Learning in Infancy Is Active, Endogenously Motivated, and Depends on the Prefrontal Cortices <i>Gal Raz and Rebecca Saxe</i>	247
A Glass Half Full and Half Empty: The State of the Science in Early Childhood Prevention and Intervention Research <i>Philip A. Fisher, Tyson V. Barker, and Kellyn N. Blaisdell</i>	269
Impact of New Family Forms on Parenting and Child Development <i>Susan Imrie and Susan Golombok</i>	295
Play, Curiosity, and Cognition <i>Junyi Chu and Laura E. Schulz</i>	317
Decision Making Across Adulthood <i>Jo Nell Strough and Wändi Bruine de Bruin</i>	345
Neural Development of Memory and Metamemory in Childhood and Adolescence: Toward an Integrative Model of the Development of Episodic Recollection <i>Simona Ghetti and Yana Fandakova</i>	365
Polygenic Scores in Developmental Psychology: Invite Genetics in, Leave Biodeterminism Behind <i>Laurel Raffington, Travis Mallard, and K. Paige Harden</i>	389
The Sleep of Reason Produces Monsters: How and When Biased Input Shapes Mathematics Learning <i>Robert S. Siegler, Soo-hyun Im, Lauren K. Schiller, Jing Tian, and David W. Braithwaite</i>	413
The Connection Between Student Identities and Outcomes Related to Academic Persistence <i>Mesmin Destin and Joanna Lee Williams</i>	437
The Effects of Cannabis Use on the Development of Adolescents and Young Adults <i>Wayne Hall, Janni Leung, and Michael Lynskey</i>	461
Screen Time, Social Media Use, and Adolescent Development <i>Candice L. Odgers, Stephen M. Schueller, and Mimi Ito</i>	485
The Development of Emotion Reasoning in Infancy and Early Childhood <i>Ashley L. Ruba and Seth D. Pollak</i>	503
Bayesian Models of Conceptual Development: Learning as Building Models of the World <i>Tomer D. Ullman and Joshua B. Tenenbaum</i>	533

Development of ADHD: Etiology, Heterogeneity, and Early Life Course
Joel T. Nigg, Margaret H. Sibley, Anita Thapar, and Sarah L. Karalunas 559

Developmental Exposure to Air Pollution, Cigarettes, and Lead: Implications for Brain Aging
Caleb E. Finch and Todd E. Morgan 585

Errata

An online log of corrections to *Annual Review of Developmental Psychology* articles may be found at <http://www.annualreviews.org/errata/devpsych>