YouTube Kids: Understanding Gender and Emotion through Modern Media.

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DEDICATION

I would like to dedicate this work to all my many supporters and inspirations throughout this process. In addition to my wonderful committee, there are a few individuals I would like to thank. Thank you to Tracie Liu for listening to my ideas and providing the initial encouragement to pursue this project as a serious topic of inquiry. Thank you to my friends who have graciously listened to countless hours of my gushing and stressing over this project. Thank you to my family who see and believe in my dreams of helping create a better world.

For Addison and for every other kid just trying to understand who they are and enjoy a silly video or two.

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ABSTRACT

Through emotion socialization, children learn what emotions are, how to express them, and how to respond to them from the models they observe (Eisenberg et al., 1998; Gottman et al., 1996). Modeling of emotional displays is often gendered: American stereotypes of masculinity and femininity include emotional display rules, which are reflected in media (Oliver & Green, 2001). Masculine characters display more anger, while feminine characters showed more positive emotions, fear, and sadness (Oliver & Green, 2001). YouTube Kids is more interactive than traditional media, providing a more responsive media context of emotion socialization that has not been previously studied, and I endeavored to explore how these videos function as contexts of emotion socialization during middle childhood. We coded gender and emotion content to determine whether gendered patterns of emotion were present. I created two ghost users, to span the middle childhood range (6- to 12-years-old) and analyzed the top twenty recommended videos. Teams of independent researchers coded at the character and video levels. Each video received a gender global rating, as either completely feminine; mainly feminine with some masculinity; equally feminine and masculine; no gender-typed content; mainly masculine with some femininity; or completely masculine. Gender presentation of each character was coded as only feminine; both masculine and feminine; neither feminine nor masculine; or only masculine. Each video also received a global rating for emotion, for both positive and negative emotionality on a three-point Likert scale (0-2). Emotion coding for each character also used a three-point Likert scale (0-2) to indicate the extent of prototypical emotions such as pride, love, excitement, happiness, positive surprise, negative surprise, shame/guilt, anger, fear, and

sadness/distress. Paired t-tests revealed there were significantly more positive emotions than negative emotions displayed within these videos (t (301) = 20.49, $p < .001$). There was a non-significant trend for video gender rating to interact with the within-subjects factor of positive vs negative emotionality, F (2, 17) = 3.14, Wilks' lambda = 0.73, $p = .069$. Though this finding must be interpreted with caution, this trend suggests that the disparity between positive emotionality and negative emotionality differed according to the video's gender rating. When emotion and gender are observed at the character level, there was a significant difference in positive and negative emotions displayed by characters according to their gender presentation (F (3, 298) = 4.46, Wilks' lambda = 0.96, $p = .004$) with feminine characters displaying more positive emotions than their masculine and non-gendered stereotypes. Tentative findings suggest emotionality is gendered in YouTube Kids videos, but replication research is required to clarify these findings. Media has potential to be an avenue to reduce gender boundaries on emotions by promoting equal representations of people and their sentiments. However, current findings suggest videos on YouTube Kids may perpetuate gender-stereotyped emotionality.

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1. BACKGROUND

1.1 Introduction

Throughout development, individuals learn what emotions are, how to express them, and how to respond to them. This process is just one of the many arenas of socialization, the life-long progression of maturing individuals learning to recognize and adapt their behaviors to the social norms. Emotional development is important for interpersonal relationships and for many other outcomes including cognitive functioning, academic achievement, and mental health (Gottman et al., 1996). Like all other aspects of development, this emotional maturation occurs within multilayered contexts, including personal, environmental, institutional, and cultural settings. In many cultures, these lessons learned about emotions are frequently conflated with and influenced by messages about gender: stereotypes of traditional masculinity and femininity include expectations of how emotions should be displayed, such as female people being more expressive of positive emotions and male people expressing more anger (Markus & Kitayama, 1991). Developmental theories suggest modern media acts as an avenue for this emotional learning. Children's understandings of gender and emotions are informed by the characters and stories they experience (Gerbner et al., 1980). The world in which children experience emotions has undergone unparalleled expansion and complexity. Creator-driven media sites, like YouTube, allow anyone to contribute to the offered media, if the content meets their community guidelines (Auxier et al., 2020). This is a large divergence from more regulated media, that must be approved through funding, editing, and proofing. Additionally, online video sharing sites, like YouTube and TikTok are beginning to outrank more traditional forms of visual media, like television: according to a census of eight- to twelve-year-old respondents, within the average two hours and forty minutes spent on

television/video viewing, nearly one hour and forty minutes are spent on online video sharing sites (Common Sense Media, 2022). YouTube is particularly popular amongst this age group, as the largest proportion, 32%, of respondents claimed they would not want to live without access to YouTube, while the second ranked site was Snapchat, a photo-sharing social media, that only 20% said they would not want to live without (Common Sense Media, 2022). Modern media is rapidly evolving, and top entertainment entities, like YouTube Kids, are becoming more interactive and individualized. Unlike preceding sources of media, including television, radio, and print media, online streaming allows viewers to choose what content they want to enjoy, from a vast pool of options, with just the click of a button, making a key deviation from previous forms of media. Specific online videos are available to watch at any time, which increases a child's ability to choose and impose control on their environment: this autonomy deepens the connections with the characters because children have handpicked what to watch (Scherer et al., 2018). Furthermore, these choices inform which content is later recommended to the viewer. This process in YouTube's platform is called their search and discovery system (Google, 2023). While the specific algorithm used to produce recommendations is proprietary information, the effect is evident: the more one type of content is consumed, the more likely other content of that type will be suggested, and subsequently viewed. These responsive avenues of socialization have not been studied at the rate at which they are changing. In the current endeavor, I analyzed content of the most popular YouTube Kids videos for components of emotional and gender socialization. Specifically, independent groups of observers coded emotional expressions, as well as video and story character gender presentation in order to examine gendered patterns of emotional

displays. Previous investigations of television and movies revealed distinct emotion display patterns in media, with masculine characters displaying more negative externalizing emotions, primarily anger, while feminine characters were shown as experiencing more positive emotions and negative internalizing emotions, including fear and sadness (Oliver & Green, 2001; England et al., 2011). I endeavored to expand understandings of how videos on the video-sharing platform, YouTube Kids, function as the modern sociocultural contexts of emotion and gender development.

I will begin with a discussion of the theoretical foundations for this research. Primarily drawing from a systems view of development; Bronfenbrenner's ecological systems theory illustrates the importance of culture as a background of development. I will detail how this theory has adapted to include the technological environments in the daily lives of people, through the neo-ecological theory. Then, I will present the leading approaches in emotion and gender development, as well as highlight the relationship between these two subjects. Subsequently, I will present empirical arguments identifying the roles of various influences on development, including parents, family units, peer groups, mass media, and larger cultural influences. Briefly, I will discuss the current cultural context and its impact on the concepts included in this project. Then, I will explain why this study focuses on videos intended for the viewing of children within middle childhood, aged 6-12 years old. Finally, I conclude this introduction by describing the current study.

1.2 Ecological Systems Theory

Foundational developmental theories, like Bronfenbrenner's ecological systems theory, have informed the scope and scrutiny of this study. Bronfenbrenner's theory expands

conceptions of what influences people as they grow and learn (Bronfenbrenner, 1977). In this theory, developmental outcomes are seen as products of layered influences within the environment. While some systems, like family units, are clearly impactful on child development, Bronfenbrenner posits that the contexts in which growth is impacted are far broader. Developmental outcomes are impacted by all levels of the environment. Foremost, the microsystem includes the contexts directly in contact with the individual, as in the places, people, and things a person interacts with in their daily life (Bronfenbrenner, 1977). Microsystems include factors like family characteristics, quality of the physical environments, and school settings. As individuals interact with other people and things within their microsystems, they are engaging in what Bronfenbrenner calls proximal processes, which are the driving forces of development (1977). Next, the mesosystem refers to the interactions between microsystems (Bronfenbrenner, 1977). One example could be different parents or guardians' views on how long, often, and with whom a child should view media (Vijayalakshmi et al., 2019). While this relationship might not directly involve the child, its presence and strength can impact their exposure to various forms of media (Bronfenbrenner, 1977). Subsequently, the exosystem conceptualizes external entities that indirectly influence the experiences of the child. Exosystems include large institutions, like governmental entities, smaller organizations, like their parent's place of employment, and policies of social media organizations, like YouTube Kids. Although the child does not personally interact with these entities, their actions and policies can be impactful on their life. For example, a school district that values an information and communication technology (ICT) curriculum, would increase opportunities for media viewing and develop technologically related competencies in its

students (Ebbeck et al., 2016). The macrosystem of the ecological systems theory corresponds to culture, ideology, and their concrete expressions (Bronfenbrenner, 1977). Macrosystems often influence development in informal and implicit methods: unstated expectations about traditional gender roles are introduced and reinforced through depictions in media, like television programs. The final ecological level is the chronosystem, and it corresponds to the how time, history, and life transitions impact development. In America, there are impactful life transitions around the twelfth year of age, when children enter middle or junior high school, start puberty, and experience increased personal autonomy. While there are numerous important ideologies concerning the influences on human maturation, this investigation has functioned primarily under Bronfenbrenner's approach because of its complex multileveled view of what impacts development. Specifically, I endeavored to evaluate characteristics of one subsection of the current macrosystem — emotion-related gender stereotypes in online video sharing. Mass media reflects the values of the macrosystem, and it has been found to contain implicit messages, especially regarding gender. For this reason, it is vital to recognize and understand the developmental impact of this component of the macrosystem.

While this study highlights cultural influences on growth, the environment of development is not deterministic. Instead, developmental settings work in concert with biological, social, and experiential forces (Bronfenbrenner & Ceci, 1994). The bioecological model of development extends Bronfenbrenner's ecological system's theory: personal factors, like genetics and individual agency, also impact developmental outcomes. Conversely, genetic information is not passively translated into developmental outcomes but is expressed differently based on the unique personal factors and sociocultural context of the individual

(Bronfenbrenner & Ceci, 1994). Despite the biological equality of monozygotic twins, when raised in different environments, these twins often develop different phenotypes (Bronfenbrenner & Ceci, 1994). This multi-factored influence on developmental outcomes is especially important concerning sex, gender, and gender identity. While the basis of gender might be debated, the environment has a significant impact on all areas of development, including emotions and gender.

Neither the environment nor genetics has sole influence over developmental outcomes. Furthermore, a child is not a passive recipient of information from the environment. The individual is an agent of change and can impact their environment. Consequently, children and the systems in which they live are reciprocal influences on each other. This bidirectional process of ongoing adaptation is essential to understanding the uniqueness of developmental outcomes. Throughout development, individuals are agents in their own experiences, but they are also impacted by their environments (Jordan, 2004). Bronfenbrenner described this phenomenon as "discovery" (Bronfenbrenner, 1977). This project endeavored to identify characteristics of YouTube Kids, a uniquely responsive form of media. YouTube Kids invites reciprocal influence, because of the algorithmic process for suggesting videos for viewing: YouTube Kids, an organization existing in a child's exosystem, supplies the videos containing culturally significant messages. As children choose which videos they want to watch, they in turn influence the messages experienced within their own microsystems (Jordan, 2004). Although the specific logic of the algorithm is privileged information, the effect is evident: once a child watches a few videos, YouTube Kids suggests other videos, similar in content, for continued viewing. As the child is exposed to certain videos, their

interest in them is likely to increase, and therefore they are more likely to continue watching those videos. Consequently, this unprecedented form of responsive socialization refines and intensifies the messages conveyed to each child. In other words, the repeated exposure to specific messages might increase the likelihood that a child would prefer that kind of video and subsequently view similar videos in the future. YouTube Kids and other forms of online video sharing, as interactive forms of media have developmental impacts and, therefore, demand to be scrutinized.

1.2.1 Neo-Ecological Systems Theory

Bronfenbrenner's ecological systems theory, while initially proposed in the 20th century, has continued to develop and evolve to account for substantial shifts in the contexts of development. The Neo-Ecological Systems Theory, proposed by Navarro & Tudge, clarifies how technological advancements can be understood within an ecological context of development (2022). In many industrialized countries, like the United States, online technologies have been somehow incorporated into every aspect of life, from video conferencing for work and educational purposes to video sharing and creating for entertainment purposes (Navarro & Tudge, 2022). Some YouTube Kids videos are products of popular culture, while others are representations of more nuanced subcultures, like gaming culture. As products of cultures, these videos can reflect or reject macrosystem ideas, beliefs, and values (Navarro & Tudge, 2022). Additionally, the online format of these cultural products expands their possible influence: while there are limitations to the free access of information on the internet, online spaces continue to create more opportunities for globalization and communal exposure to the same cultural products (Common Sense Media,

2022). Online media, however, is viewed by individuals, and these are personal interactions with content on the internet. Navarro & Tudge suggest a helpful reframing of the microsystem concept to account for the reality of developmental experiences: the microsystem can be understood physically, with traditional contexts like parent-child relationships, as well as virtually, with online contexts of interactions with other users and with content (2022). Accordingly, when an individual is engaging with content on an online platform, they are experiencing it within their virtual microsystem, and proximal processes are happening within these virtual spaces, like watching videos (Navarro & Tudge, 2022). This project examines the characteristics of YouTube Kids at the macrosystem level, by analyzing the emotion and gender content within the videos, with the goal to better understand what messages are being conveyed to children as they view these videos within their virtual microsystems.

1.3 Emotion Socialization

Emotion socialization is a sub-component of social development: as individuals grow, they utilize various methods of observation and practice to learn and adapt to the societal expectations for emotional expressions and responses (Eisenberg et al., 1998). At the same time, various settings and influences contribute unique messages about emotions, and as the individual interacts with their environment, change occurs in both directions (Bronfenbrenner, 1977). While physical, cognitive, and linguistic growth are vital to a child's life outcomes, emotional development is an equally important pillar, supporting general and unique aspects of a developing life. The extent to which children learn how to feel, identify, and express their emotions is connected to physical, social, and cognitive outcomes. Additionally, prominent levels of emotional knowledge serve as a protective factor against numerous life stressors,

including familial discord (Gottman et al., 1996; Gottman & DeClaire, 1997). Parents, as the primary caregivers, have been widely researched as key factors in emotional socialization.

1.3.1 Socialization of Emotion Regulation from the Family

Family members, especially parents, act as the primary teachers and models for portraying emotions (Eisenberg et al., 1998; Morris et al., 2007). Children learn implicitly about emotions through observing others experience emotions: as children observe their parents', or adult caregivers', emotional responses to various situations, they can begin making connections between social cues and appropriate emotional responses, as well as gauging the emotional salience of external stimuli (Eisenberg et al., 1998). Not only do parental expressions serve as models for their children, but the proximity and relationship between parent and child creates a phenomenon called emotion contagion (Morris et al., 2007). Emotion contagion signifies the sharing of an emotion between individuals because some aspects of the original expression inspired the emotion in the other individual (Morris et al., 2007). This process occurring in the family unit would provide a child with opportunities to learn emotional recognition and appropriate emotional responses to specific circumstances. This might seem to be a natural aspect of development, but the details of how it occurs alter the emotional learning of the child: if a family environment consistently contains unresolved frustration and anger, then the child will lack exposure to positive coping strategies to combat these negative emotions (Morris et al., 2007). Accordingly, parents inform the emotional climate of the most immediate context of development. In addition to overall emotional expressivity, emotional climate includes parent-child attachment, parenting styles, and quality

of the marital relationship (Morris et al., 2007). Families provide many non-formal avenues of learning about emotions, through modeling, as well as explicit teaching about emotions.

1.3.2 Emotion Coaching

In addition to modeling, observational learning, and the emotional climate of the family, how a parent responds to a child's emotions will impact how the individual is later equipped to regulate their emotions. Emotion coaching, as defined by Gottman and DeClaire (1997), is a specific emotion related parenting practice that follows five steps as parents respond to their children's emotions. These practices include being aware of low intensity emotions, using negative emotions to teach and bond, validating emotions, helping to label emotions, and assisting in resolution strategies for negative emotions (Gottman et al., 1996). Primarily, parents develop an awareness for the emotional expressions of their child. Then, emotion coaching parents take advantage of these moments to connect with and instruct their child. During this process, empathy and validation of the emotion is vital (Gottman & DeClaire, 1997). Emotion coaches assist children in identifying and explaining what they are feeling. Lastly, parents operating within this framework will, if a negative emotion, work with the child to discover ways to remedy the issue as well as maintain boundaries and expectations for behaviors (Gottman & DeClaire, 1997). It is important to differentiate this aspect of parenting from general parenting styles and relational warmth. Although each of these concepts are impactful aspects of parenting, emotion coaching behaviors, or a lack of such behaviors, are distinctly related to emotional development and regulation skills (Gottman & DeClaire, 1997). When parents specifically address emotions and act as mentors to understand them, children display many positive impacts, across socio-emotional and

academic domains. Because media and its characters can provide additional contexts for emotional expression, emotion recognition and resolution strategies, like emotion coaching, within the media content itself could deepen the impact of emotion socialization through media.

1.3.3 Emotion Related Socialization Behaviors

One well-validated avenue of emotional learning was developed by Eisenberg et al. (1998) and is known as Emotion Related Socialization Behaviors (ERSB). ERSB refers to patterns of parental behaviors related to emotions: parental expressions, reactions, and discussions of emotions. Parental emotional expressions include what emotions are modeled for children. Additionally, how parents respond to their children's emotional expressions and the methods they use to discuss emotions are crucial aspects of familial influence on emotional development. Negative parental responses to children's emotions are linked to increased levels of negative emotionality and low social competence in children (Eisenberg et al., 1998). ERSBs demonstrate the distinct mechanisms of emotional learning within the parent-child relationship. These constructs can also provide a framework for identifying emotional messages in other domains, like the interactions between virtual characters.

1.3.4 Parent Meta-Emotion Philosophy

Furthermore, researchers Gottman et al. (1996) developed the frameworks of Parent Meta-Emotion Philosophy (PEMP) to further study the role of family on emotional development. PEMP examines meta-emotion, which consists of the parents' thoughts and sentiments towards the emotions in themselves and in their children. When parents are more aware and supportive of emotions, they are also more likely to practice positive parenting,

both of which have been shown to benefit children in their regulatory systems, both physiologically and behaviorally (Gottman et al., 1996). The concepts of emotion coaching, ERSB, and PEMP demonstrate the variety of methods used within the family unit to communicate messages about emotions. Accordingly, research concerning broader environments of socialization must include and expand upon these communicative tools. I employed modified versions of these concepts to determine emotional content in audio-visual media: instead of parental behaviors, this study conceptualized emotional messaging as any actor or narrator's reactions, discussions, or personal expressions of emotion. In this way, the recognized mechanisms of emotional learning within the family are extended to other arenas of socialization.

1.4 Gender Socialization

1.4.1 Modern Conceptions of Gender

Like emotion socialization, gender socialization is an influential and well-researched aspect of development. The social understanding of gender is undergoing a transformation. Traditionally, gender has been viewed as binary categories, male and female. Gender is now seen as a product not of biological factors, but of psychological factors and socially constructed influences (Hidalgo, 2013). This means previously gender-stereotyped behaviors, roles, and appearances are not universal or confined to one gender. Modern gender theorists conceptualize gender as a continuum, ranging from masculinity to femininity. While the idea of gender is expanding, previous analyses of gender development utilized an assumption of binary genders.

1.4.2 Social Cognitive Theory of Gender Development

Despite this evolving definition of gender, classic socialization theories explain the processes and cognitive mechanisms of internalizing messages about gender. Primarily, the social cognitive theory (SCT), presented by Bandura and Bussey (1999), explains an individual's gender development as a combination of personal factors, environmental influences, and practiced behaviors. According to SCT, these personal factors include any biological determinants, the individual's temperament, and the cognitive structures related to gender (Bandura & Bussey, 1999). Additionally, the characteristics of the context of development will influence how gender is understood. The environment's effect can be seen in the available toys in children's rooms: parents provide girls with more dolls, playhouses, and items for domestic tasks, but boys receive more educational materials, like books, machines, vehicles, and sports equipment (Bandura & Bussey, 1999; MacPhee & Prendergast, 2018). While these micro-environments are principally impactful, gender development is informed and influenced by all levels of the developmental ecology (Bandura & Bussey, 1999). Characters portrayed in media, a product of the macrosystem, usually include some aspects of gender, and their representations send messages about expected behaviors, appearances, and preferences for people of different genders.

1.4.3 Constructivist-Ecological Perspective on Gender Development

Another leading theory of gender development combines the cognitive approach of Piaget with the systems view of Bronfenbrenner. Piaget's theory of development emphasizes that the individual is an active participant in forming cognitions, and the resulting beliefs and behaviors: as a child is exposed to external messages about gender, they selectively pay attention to and internalize certain stimuli (Liben, 2015). The dual pathway model posits this

selectivity results from two different methods that individuals use to decide the relevance of external information. The first pathway is the attitudinal pathway, which guides behavior along gendered lines based on what the individual believes to be correct about gender differences (Liben, 2015). The second pathway, which is aptly called the personal pathway, influences general conceptions of gender differences based on an individual's characteristics (Liben, 2015). In addition to selective attention, cognitive structures of information, called schema, influence what information is more memorable (Liben, 2015). According to studies conducted by presenting children with gender-stereotypic and counter-stereotypic images, the pictures including men in traditionally male professions, like a dentist, and those including women in traditionally female professions, like nurse, were more memorable, especially for children who held highly stereotyped definitions of male and female (Liben, 2015). Not only is the development of gender an active and cognitive process, but it is also a product of how environmental information is conveyed. At all levels of human ecology, the traditional gender binary has been used as a dividing social category: in understanding these groups, children rely on several aspects to differentiate and determine their significance. According to the developmental intergroup theory (DIT), these aspects include how easy it is to discern group members based on physical characteristics, how explicitly the group is labeled, and how the group is used differentiate roles and activities (Liben, 2015). The Constructivist-Ecological perspective highlights the importance of recognizing an individual's active participation in forming their understanding of gender, while also contextualizing the significance of environmental messages of gender differences.

1.4.4 Mechanisms of Gendered Learning

Gender roles are understood through action: as individuals participate in behaviors stereotypically associated with one gender, they learn what behaviors are acceptable for them, based on their gender. One process of gender learning is receiving feedback on gendered activities. When fathers react negatively to their sons playing with feminine toys, those children learn that behavior is not appropriate (Bandura & Bussey, 1999). This example, and other instances of social feedback, cognitively link gender with those activities. Children also learn about gender through explicit instruction: parents, peers, and other informers teach individuals about gender differences (Bandura & Bussey, 1999). Finally, social modeling provides a considerable avenue for observational learning from the successes and failures of others engaging in gendered behaviors (Bandura & Bussey, 1999). This aspect of development is intensified by selective attention: as soon as children can determine the distinction between different gendered models, they concentrate on the same-gendered exemplars. It is important to note that while there is wonderful progress in improving gender equality and expanding a more nuanced understanding of gender as a spectrum, many current practices and cultural expectations still conform to these stereotypes. Through this study, I endeavored to discover the extent of gender stereotypes in modern media, as well as to inform future work of increasing gender egalitarianism.

1.4.5 Related Outcomes

Gender development is a critical aspect of maturation, not only because it dictates what activities and roles are socially acceptable, but also because those distinctions can have profound impacts on numerous life outcomes. Males are disproportionately promoted to foster socially valued and profitable skills, like computer literacy, mathematics, and engineering

(Bandura & Bussey, 1999). Furthermore, males report higher levels of self-efficacy in these skill areas, despite having the same capability levels as their female counterparts: males have more confidence for future successes, but this confidence is based on stereotypes and not factual ability (Bandura & Bussey, 1999). Finally, emotional well-being can be differentially impacted along gender lines. Women, often beginning in late adolescence, experience feelings of depression at a higher rate than their male counterparts, and this disparity is caused by lower feelings of general efficacy, the ability to act and impact one's environment, as well as higher incidence of stresses due to the gender role (Bandura & Bussey, 1999). These gender differences have been found to continue into adulthood, but they are mediated by other factors, like level of education and income: generally, levels or major depression and generalized anxiety disorder are higher in female populations, but among women who have more education or larger incomes, these disorders occur less frequently (Loret de Mola et al., 2020). As one of the dominant social categories, gender is not an innocuous concept but is laden with assumptions and repercussions.

1.5 The Relationship between Emotions and Gender

Emotion and gender development have been specifically addressed in this project, because of their interconnectedness. Throughout the lifespan, emotions and their socially acceptable expressions are a subset of stereotyped expectations of how gender should be displayed. Women are thought to be more affectionate and smile more frequently (Brody, 1997). Alternatively, negative emotions, like sadness, fear, and anger are also commonly associated with one gender or the other: even young children expect women to show more sorrow and alarm, while men display more anger (Brody, 1997). Like all stereotypes, these

cognitive assumptions do not reflect the whole of reality and often contribute to reinterpretation of information based on biases. When the measurement of anger includes verbal expressions, women indicate higher levels of anger then their male counterparts (Brody, 1997). Some researchers postulate that this gap has resulted from skewed modality in how anger is expressed and measured: because men display anger through obvious modes of physical aggression and arousal, anger is more commonly attributed to that gender (Brody, 1997). Similarly, the stereotype of women being more emotionally expressive in general, has been shown to not result from a larger frequency of emotional events, but higher intensity of expressivity (Brody, 1997). Although this disparity between perceived and reported emotionality has been identified, certain types of emotional displays are still more culturally accepted for one gender but rejected when displayed by an individual of the other gender (Bandura & Bussey, 1999). Within western gender stereotypes, women are characterized as more sensitive to and aware of the emotions of others (Markus & Kitayama, 1991). Even as children are learning the emotional messages conveyed by specific facial expressions, female children, aged six- to sixteen-years-old, have more accuracy in determining expressions of happiness, surprise, disgust, and anger (Lawrence et al., 2015). This attention to other's emotional expressions is partially supported by observed differences between men and women's correct interpretations of nonverbal emotional expressions: women are more accurate when identifying emotions from rapid (ten and one second) exposures to the expression (Hall & Matsumoto, 2004). Additionally, this gender difference in emotional recognition is contingent on the method (verbal or nonverbal) and the content (type of emotion) of the expression: women better identify nonverbal happiness and sadness, as well

as verbal anger, while men better identify nonverbal anger (Lin et al., 2021) This difference in emotional awareness is analogous to two identified categories of emotions, differentiated based on the originator of the emotion: Ego- and Others-focused emotions (Markus & Kitayama, 1991). Ego-focused emotions are related to the person's own needs and goals and include sentiments like pride and anger. These self-focused emotions support an independent self-concept, which is consistent with the stereotypical autonomy attributed to males (Markus & Kitayama, 1991). Conversely, others-focused emotions, including shame, guilt, and love, are associated with the goals and needs of others: this external and prosocial attention corresponds to an interdependent view of the self and stereotypical feminine psychology (Markus & Kitayama, 1991). In this project, I also analyze emotional displays along the Ego- and Others-focused lines, as they directly correspond to gender stereotypes.

2 Integrative Summary

Theories of development range from cultural to personal factors, and researchers have examined various domains of growth. The ecological systems theory illustrates how increasingly distant layers of the environment can still impact developmental outcomes: specifically, social stereotypes of gender and emotionality can be conveyed through media, which is a product of the macrosystem. My project explores the characteristics of this influence to inform how online video sharing could impact emotional and gender learning in children. Furthermore, YouTube Kids, and other modern video-sharing platforms, combine individual choice and organizational influence by suggesting videos for viewing based on previous choices. This unique aspect of media exposure and consumption is an extension of an individual's agency on impacting their environment. Children engage in self-socialization

when they chose which videos to view (Liben, 2015). Because development is influenced by each layer of the environment, specific domains of growth have been investigated at each of these levels. Emotion and gender learning begins in the microsystem: the family context has been seen to inform how and what children learn about gender and emotionality. While there are instances of explicit teaching and distinct parenting practices that contribute, gender and emotional development is illuminated by the quality of the models in a child's context. Accordingly, the models provided by characters in online videos will augment the examples set by parents, siblings, and peers. Not only does this project contribute to understanding what social messages exist in new forms of media, but it also investigates the presence of gender-stereotypical patterns of emotional expressions. Because strict gender stereotypes impact economic, academic, and mental health outcomes, the messages conveyed to children about expected behaviors can have profound ramifications. Now, I will transition to focus on empirical discoveries that show the unique roles of families, peer groups, and mass media as socialization influences on children's views of emotion and gender.

3 Empirical Background on Socialization Influences on Gender and Emotion

3.1 Families and Parents as a Context for Socialization

Learning about emotions and gender happens in innumerable aspects of life. In accordance with the ecological systems theory, the most impactful socialization occurs in the macrosystem, with the influence of parents or primary caregivers. As the immediate context, family units—their activities, characteristics, and resources—can both buffer and exasperate the impacts of other influences (Bronfenbrenner & Ceci, 1994). It is important to note that as within any system, the influence of family units is transactional and bidirectional with both

parents and children influencing the other's actions and reactions over time (Casey & Fuller, 1994). There are, however, distinct connections between parenting behaviors and developmental outcomes, especially concerning gender and emotions.

3.1.1 Parents and Emotions

While emotion and gender have been studied concurrently, more studies focus only on one of these concepts. The socioemotional domain of development has been extensively studied, and distinct links between parental behavior and children's emotional understanding have been identified. When the parents consistently form an unreliable, negative, or manipulative emotional climate within the family, children are more likely to have overly emotional reactions to daily life events (Morris et al., 2007). Conversely, when parents create responsive and stable environments that encourage emotional expressions, children feel more secure and able to display their emotions. When parents are more emotionally expressive, their children are more likely to express emotions in an effective way (Morris et al., 2007). Furthermore, children with parents, who display more positive emotions, tend to be more prosocial, positive, and have better relationships with their parents and peers (Morris et al., 2007). Inversely, families displaying higher rates of negative affective factors, which include expressions of impatience and irritation, are more likely to report increased aggressive behaviors in their children (Roberts, 2020). In these ways, the patterns of emotional expressions within the family are extended to other contexts of socialization.

3.1.2 Parents and Gender

Naturally, parents also greatly impact the development of gender. This can occur within several specific parenting practices and general behaviors. In many families,

heterosexual couples embody the child's first and strongest example of gender roles (Fagot, 1978). Not only do parents provide the first examples of what gender looks like, but parental practices often reinforce traditional gender stereotypes. Parents tend to display more approval for their child's behavior, if it aligns with historic conceptions of how a child of that sex should act (Fagot, 1978). Some major developmental outcomes impacted by differential parental treatment are curiosity and independence. Boys are more encouraged to explore, and girls are compelled to develop deeper dependence on their parents (Fagot, 1978). Additionally, parental gender expectations can distort perceptions and standards of potentially problematic behaviors, like aggression: in one study, combativeness was considered more fitting for boys, even when all children in the study, boys and girls, displayed the same amount of aggression (Fagot, 1978). Reinforcement of gender stereotypes usually occurs without parental recognition, even when parents have endeavored to raise their children with gender equality (Fagot, 1978). Through modeling, explicit teaching, and implicit expectations, parents use a variety of methods to instruct their children about gender.

3.1.3 Parents and the Relationship between Emotions and Gender

Parental influence on gender and emotion development is considerable, and these two areas of learning are often compound by gender-related rules for emotions. Researchers Casey and Fuller (1994) termed these parental assumptions "emotion-related expectancies". Because parents expect different emotional displays based on the gender of their child, they more actively chastise when their child acts counter to traditional gendered expectations of emotionality (Casey & Fuller, 1994). Furthermore, parents, particularly fathers, respond more encouragingly when children display negative emotions within gender stereotypical ways:

fathers were more supportive of daughters displaying submissive emotions, like sadness (Chaplin et al., 2005). Parental emotion-related expectancies have primarily been observed regarding maternal responses and expressions of fear and sadness. Boys were more likely to be told to repress their expressions of fear or to verbally explain their fear, while girls were more expected to express more fear and sadness, both of which perpetuate stereotypic gendered rules of emotional expression (Casey & Fuller, 1994). Additionally, parental Emotion Related Socialization Behaviors differ according to the gender of the child: parents use a more problem-solving approach when explaining emotions to their sons, but daughters receive more interpersonal explanations of emotions, focused on identification and sensitivity (Cervantes & Callanan, 1998). Parents comprise most of a child's initial microsystem, so they have a powerful position in their children's emotional and gender development.

3.2 Peer Groups as a Context for Socialization

As children develop relationships outside of the family unit, peers and other individuals begin to exert a weightier influence on conceptions of self, gender, and emotions. This non-familial group of socializing agents often includes friends, classmates, and non-parental adults (Eisenberg et al., 1998). While this context of socialization has not received the same quantity of in-depth analysis as familiar influence, previous investigations have determined the presence and characteristic of emotion socialization within peer groups (Denham, 2007).

3.2.1 Peers and Emotions

In middle childhood, emotional expressions become salient factors in peer evaluation: according to groups of kindergarten and third grade students, individuals displaying happiness

were regarded as the best children, while individuals displaying anger were considered the worst (Sorber, 2001). This evaluation process, as well as other developmental pressures, manifest through social expectations regarding emotional expressions, which are called display rules. Display rules are the culturally defined guidelines for how emotions should be communicated: through middle childhood, these display rules encourage a shift from external to internal experiences of emotionality (Denham, 2007). Peer groups discourage the display of most emotions (Denham, 2007). Accordingly, acting within display rules makes the self-concept more complex, by introducing the "public self", which is the version of an individual with an emotional front that complies with the display rules of their environment (Denham, 2007). Within groups of peers, display rules emphasize the suppression of emotionality, especially negative emotional expressions of sadness, anger, and jealousy (Denham, 2007). Groups of similar-aged peers stanchly uphold their display rules and reject those who do not act within the social norms. As emotional displays are increasingly discouraged, children learn strategies to control their negative emotional expressions, including physically leaving situations and adopting emotional fronts (Denham, 2007). Close relationships, however, can serve as avenues for emotional behaviors, including affection, concern for others, and emotional intimacy. In addition to enforcing social expectations and offering friendship, peer groups in middle childhood become important in refining emotional cognition. As general cognitive skills increase, emotional knowledge becomes complex, expanding to include more obscure sentiments like shame and guilt (Denham, 2007). Additionally, peer relationships are ideal contexts for learning about emotions in different circumstances, behavioral expressions for individual emotions, and how friends should respond to other's emotions (Denham, 2007).

Display rules are not confined to peer groups, but also function at the cultural level. These cultural display rules define which forms of emotional communication are acceptable and encouraged within a specific culture (Gnepp & Hess, 1986). As YouTube Kids is a manifestation of overarching culture, tailored for distinct age-groups of viewers, it offers virtual examples of the peer culture and rules defining appropriate emotional expression.

3.2.2 Peers and Gender

Peer groups also present a unique atmosphere for learning about and developing gender identity. During middle childhood, children increasingly interact exclusively with peers of their same gender: when the available models of appropriate behaviors are narrowed to those of the same gender, children increase their propensity for gender-stereotyped behaviors (Bandura & Bussey, 1999). In addition to segregated social groups, children during this stage of development display a distinct desire to engage in gender-stereotyped activities, like exploration for boys and domestic play for girls (Bandura & Bussey, 1999). While the preference for same gender peers lessens in the following years of adolescence, cognitive understandings of gender differences and patterns of gendered behaviors are attained long before this period (Bandura & Bussey, 1999).

3.2.3 Peers and the Relationship between Emotions and Gender

Within these groups, peers often act as enforcers of the cultural expectations of appropriate behaviors, by rewarding behaviors that conform to the individual's gender and punishing behaviors that counter the expectations (Bandura & Bussey, 1999). This social evaluation and feedback are often stronger for boys engaging in stereotypically feminine behaviors: regarding emotions, display rules begin to differ along gender lines and peers

become a critical context for enforcement. Only a third of boys within middle childhood will discuss age-appropriate fears with peers, as communicating fear does not conform to the traditional masculine stereotype of bravery and is often ridiculed (Denham, 2007). Alternatively, girls of the same age report actively suppressing their feelings of anger, especially towards peers and teachers, significantly more than boys (Denham, 2007). This reveals an intricate aspect of development within social groups of peers: while peers contribute to an individual's understandings of gender, emotions, and display rules, they are also being shaped by the same processes.

3.3 Mass Media as a Context for Socialization

Outside of family and peer groups, there is a broader environment in which development occurs—the macrosystem. This context refers to the influences of culture and ideology through their material manifestations. Despite existing in different forms throughout history and settings, mass media reflects the values and beliefs held by a culture. Conversely, as media portrays characters either conforming to or rebelling from societal expectations, it provides an expansive arena for learning about emotions and gender (Bandura & Bussey, 1999). The mechanisms through which media impacts cognition and informs how to act within that culture continue to be extensively analyzed. Proposed by Gerbner et al., cultivation theory (CT) explains how the impact of media on cognition is a product of media content and frequency of exposure (1980). The qualitative substance of media determines what messages are conveyed from cultural ideology: television shows and movies displaying strictly gender-stereotyped characters only reinforce these culturally held beliefs (Gerbner et al., 1980). Additionally, the quantity of time viewing these productions determines the level

of influence the messages have on developing cognitive structures (Gerbner et al., 1980). Both subject matter and extent of exposure alter the impact of mass media on cognition because these productions contain social models for behavior. Considering social cognitive theory, the characters in media act as models for children as they develop an understanding of expected behavior within a variety of contexts (Bandura & Bussey, 1999). If media is viewed repeatedly and the cultural messages are displayed consistently, stereotypes will be substantiated (Bandura & Bussey, 1999). Additionally, this modeling will communicate how these implicit social rules can be appropriately maintained within different settings. Media and its messages of how emotions are expressed and how to respond to them can reinforce, counter, or offer alternative ideas from those provided from parents and peers. This can be vital in socioemotional development because it facilitates a shift from familial display rules to more comprehensive understandings of emotional displays (Halberstadt et al., 2001). Mass media is an expression of culture, and it has immense potential to influence development.

With the rise of audio-visual media accessibility in the home, the impact of television on development and cognition has been widely analyzed. In its height of popularity, television surpassed all previous forms of media by providing the largest body of common information: television became a resource and teacher of collective social knowledge, including gender and emotionality (Calvert & Huston, 1987). Additionally, television and other audio-visual media has made learning about complex concepts, like intentionality and morality, more accessible for children (Chandler et al., 1973). Children, aged six- and seven-years-old, were able to make more appropriate moral judgements about ambiguous situations when the information was presented through a video, rather than just verbal prompts (Chandler et al., 1973). This

suggests audio-visual forms of media have expanded social learning because it does not require the same language and verbal skills as explicit instruction or written media. Not only is newer media impacting children's social development at a younger age, but it is also being consumed in a different atmosphere. Children are increasingly viewing and engaging with various forms of mass media, and this exposure is becoming less moderated by familial influence (Scherer et al., 2018). Co-viewing is the practice of parents (or adult guardians) and children watching a program together, but due to numerous factors, children are independently viewing media (Scherer et al., 2018). Although television is no longer the dominant form of media, the trends of viewing and learning can be carried over to other forms of audio-visual media, like online videos.

3.3.1 The Relationship between Emotions and Gender in Media

As television has been one of the major settings of learning from media, numerous researchers have identified distinct cultural messages concerning gender and emotions. Strikingly, in American and many other western countries, television programs for children spotlight twice as many male characters than female ones (Valdivia & Signorielli, 2012). Because television and other media are produced for entertainment and not educational purposes, the portrayals of gender stereotypes generate incidental, rather than intentional learning (Calvert & Huston, 1987). These unintended lessons are pervasive, and they concern many aspects of gender stereotypes, including appropriate interests, roles, behaviors, and emotional expressions. Depictions of male characters, in media created for children, include more aggressive professions and roles, like firefighters, police officers, adventurers, and leaders (Picariello et al., 1990; England et al., 2011). Conversely, female characters are

described as caregivers, nurses, teachers, and victims (Picariello et al., 1990; England et al., 2011). Personal attributes are also unequally represented in characters depending on their displayed gender: males are perceived as louder, stronger (and more athletic), braver, smarter, more intimidating, more ambitious, and significantly less emotional (Picariello et al., 1990; England et al., 2011; Bandura & Bussey, 1999). Feminine characters are presented as gentler, weaker (both physically and mentally), needier, and notably more emotional (Picariello et al., 1990; England et al., 2011). While these portrayals of characters provide stereotypical models, they also influence the audience being exposed to these messages. Modern media, especially animated content for children has been directed towards audiences of one gender or the other, and children recognize these differentiations as early as four-years-old (Oliver & Green, 2001). Children describe media as being "for boys" when it includes fighting and aggressive behaviors, but media is "for girls" if the main character is female and it includes themes of love and affection (Oliver & Green, 2001). Not only do children recognize when media is created for one gender, but they also tend to prefer stories that fit within their understanding of gender roles. Even at four-years-old, children's preference in media echoes expected adult preferences along gender lines: females prefer movies of emotion and romance, while males select content of violence, action, or horror (Oliver & Green, 2001). As children hold more rigid gender stereotypes, their preference for media with distinctly traditional portrayals of men and women (Oliver & Green, 2001). Gendered presentations in and preferences of media demonstrate the significance of media in gender development.

These gender stereotypical portrayals are not confined to roles and activities but are often united with gender appropriate emotional expressions. While females are displayed as

being vastly more emotional, specific emotions are more considered more permissible for one gender but prohibited for the other (Bandura & Bussey, 1999). Male characters are frequently depicted as angrier, as an extension of the aggression and dominance stereotype (Oliver & Green, 2001; Martin, 2017). Female characters, however, are shown displaying more affection, sadness, and fear, which supports the romantic and emotionally volatile stereotype (Oliver & Green, 2001; Martin, 2017). These gender and emotion stereotypes have been found in many forms of media, including children's television, and they will likely continue to inform modern media production.

3.3.2 Characteristics of Modern Media

Just like cultural ideologies and values, the content and manner of media is not static, but shifts with time, technology, and public sentiment. Recent analyses of gender content in media have discovered increasing role and activity androgyny, meaning masculine and feminine characteristics existing in the same individual, but emotional stereotypes are still rigidly maintained (England et al., 2011). Despite progress towards egalitarian presentations of characters of both genders, departures from traditional masculinity in male characters are more likely to be dismissed and socially excluded (Oliver & Green, 2001). Furthermore, visual media for children continues to be dominated by male characters, which can implicitly communicate that male's experiences are more exciting or worthwhile (Walsh & Leaper, 2020). As content continues to be created, this project endeavored to gauge the progress of increasing androgyny in media depictions. Mass media has also undergone an expansion of conveyance, due to the introduction of the internet and online media sharing platforms. Online media, like YouTube, has dethroned television as the top mode of entertainment for children:

in 2020, YouTube was ranked first and YouTube Kids, a subset of the site with the same children's videos but more parental controls, was ranked fifth (Ceci, 2022). Not only are online media sites highly visited, but they are categorically different from previous forms of media. Unlike television, videos on YouTube Kids are available to watch whenever the child has access to the site, which means increased child autonomy and interaction with the content. This elevated control of media exposure deepens connections with the characters because children interact with the characters by choosing to watch their content (Scherer et al., 2018). Modern media has expanded the breadth and depth of socialization through that aspect of the culture.

4 Cultural Considerations

Briefly returning to the discussion of the macrosystem, no study of gender nor emotion could be fruitful without carefully considering the cultural framework in which the research is being conducted. In the realm of emotions and emotional displays, some identical behaviors are perceived vastly different depending on cultural background (Halberstadt et al., 2001). Aggressive behaviors and the related feeling of anger are, in some contexts, encouraged as means of self-protection, but in others, inhibited (Halberstadt et al., 2001). Different cultures prioritize different emotional display rules, as well as inverse foci of emotions. Most Western cultures support an individualistic conception of the self, which invites emotions related to and expressing the individual’s needs, which are considered ego-focused emotions (Markus & Kitayama, 1991). Collectivist cultures, however, value a natural interdependence between individuals, which prioritizes the needs of the group or others. The corresponding other-focused emotions seek to understand feelings and affect from within the

social context and relationships (Markus & Kitayama, 1991). Gender stereotypes are also cultivated within distinct cultural and historical contexts. While some cultural differences in gender roles and emotional display rules are minor, there are others that clearly demonstrate gender stereotypes are not universal: in Iran, and surrounding countries, men are considered and expected to be the more emotionally expressive gender (Epstein, 1997). Traditional western culture, however, established women as more expressive and encouraged men to suppress emotionality. This study was conducted within the context of the twenty-first century in the United States and, while there is much cultural diversity within the content offered by mass media, it is important to see how the information obtained by this endeavor is also a product of its environment.

5 Middle Childhood

While all development stages are theoretically impacted by cultural messages in modern media, the specific age range of middle childhood (six to twelve years-old) was chosen for many reasons. Middle childhood contains many developmentally significant factors. Many children of this age experience numerous transitions of roles and contexts. Bronfenbrenner conceptualizes changes like this as ecological transitions, which are especially vulnerable/formative periods in growth (Bronfenbrenner, 1977). These changes often include biological transitions, like the impetus of puberty, social role changes, as the child gains more autonomy and responsibility, and microsystem shifts, like moving to a middle school environment. As children begin to spend more time with peers, these similar-age groups become increasingly influential in informing about social norms. Additionally, middle childhood is a common time that children are receiving personal smartphones (Auxier

et al., 2020). This is not only a reflection of their increasing autonomy, but it is also an indication of decrease co-viewing of media with their parents or caregivers. Furthermore, if children had not been exposed to online forms of media prior to middle childhood, they are almost certain to be within this age range. Nearly 90% of American children between five and eleven years old have viewed videos on YouTube, with 35% of them watching these videos more than once every day (Auxier et al., 2020). While data on YouTube Kids users is not publicly accessible, it is probable that the percentage of children using this online platform is larger than its counterpart, because of the additional parental controls.

Moreover, middle childhood contains unique developmental tasks in the socioemotional domain. Children entering middle childhood experience a substantial shift in how emotions are expected to be expressed. These social expectations are referred to as display rules, and these rules evolve as individuals move between age groups and social contexts (Saarni, 1979). Children's increased awareness of and submission to display rules corresponds with cognitive development and more complex socialization settings (Gnepp & Hess, 1986). Middle childhood, especially between the primary school years of first to fifth grade, is the critical phase for understanding display rules, as levels of this emotional knowledge increase during these years and then lessens after fifth grade (Gnepp & Hess, 1986). Not only does the rate of emotional learning change, but the manner changes too: in middle childhood, emotional learning transitions from direct feedback, provided by parents, teachers, and other adults, to observational learning.

Display rules in middle childhood also become increasingly complex and context specific. Children begin to effectively utilize situational information and complex reasoning

to understand causes and social acceptability of their own and other's emotions (Saarni, 1979). One example of this is when emotional expressions correspond to physical pain or hurt. In this case, the emotion does not have to be as strictly regulated because there was a physical cause to the expression (Gnepp & Hess, 1986). Additionally, emotional awareness expands beyond specific facial expressions and children use more situational contexts to interpret someone else's affect (Saarni, 1979). Finally, these children can begin to understand that external expressions do not always reflect internal states or feelings (Saarni, 1979). Children in middle childhood, therefore, must not only incorporate increased peer influences and more controlled display rules, but they must also become experts at adapting this emotional knowledge to different social situations (Gnepp & Hess, 1986).

Social pressures towards increased emotion regulation also shift specific display rules, and the extent to which children's emotional behaviors correspond with the applicable display rules impacts their social development. Prior to middle childhood, emotional expressivity is widely encouraged: aggression, for example, in low to moderate levels can increase social competency in preschool children, because of its assertiveness function. (Roberts, 2020). Middle childhood, however, is a period of emotional repression, and displays of aggression become major impediments to developing peer relationships (Roberts, 2020). It is important to note that display rules are culturally defined: the expected emotional expressions of children in one group might vary significantly from those in another, but the process of acquisition and impact on peer acceptance are applicable in many diverse contexts (Saarni, 1979). Display rules are connected to cognitive competence and social acceptance, making them integral and unique aspects to the middle childhood period of development. In efforts to

detect the display rules emphasized to this age group in modern media, I limited analyses to videos recommended to YouTube Kids users, whose reported age was within middle childhood. Likely, the display rules included in these videos reflect and intensify the increasingly complex display rules being learned during middle childhood.

6 The Current Study

Emotion socialization, the process through which children develop skills of regulating and responding to emotions, is essential in maturation and instrumental in numerous life outcomes. What children learn about emotions is frequently conflated with implications about gender: stereotypes of masculinity and femininity include emotional display rules (Oliver & Green, 2001). Parents and peers have been identified as the strongest influencers of these developmental processes, but a systems-view broadens the scope of development to include cultural influences on growth, which are manifested in the media and entertainment products. This systems-view of development also reveals intricacies of development because of the mutual exchange and change that occurs between an individual and their environment. When children engage with videos on YouTube Kids, they are having direct interactions with the content, within their virtual microsystem (Navarro & Tudge, 2022). While other media agents have been analyzed, I selected YouTube Kids because it will address a novel and less controlled source of emotion socialization. Each year more children and adolescents gain access to online media content, and this form of media is often created by individuals or smaller production companies, which is a large deviation from previous media sources, like television and film (Common Sense Media, 2022). This project investigates the role of child-directed YouTube content in emotion and gender socialization during middle childhood.

6.1 Hypotheses

First, I hypothesized that there will be more evidence of emotional socialization in child-directed media content on YouTube Kids for positive emotions than for negative emotions. In other words, expression of positive emotions would be more common than expression of negative emotions both for video characters and for videos overall. Second, I sought to identify patterns of emotional expression along gender lines. I hypothesized the videos marketed for girls would contain more emotion socialization for positive emotions and for other-focused emotions (love and shame/guilt), whereas the videos marketed for boys will contain more emotion socialization for negative emotions and for ego-focused emotions, including pride and anger. Likewise, I expected that video characters with feminine gender presentations would express more positive emotions and other-focused emotions and fewer negative emotions and ego-focused emotions than video characters with masculine gender presentations. This gendered pattern of emotional expression has been seen in other forms of child-directed media, including television and movies (England et al., 2011).

METHOD

1 Video Selection

To select videos from YouTube Kids, I created two ghost users (one in the 5 to 8 years-old group and one in the 9 to 12 years-old group) to include videos that would be recommended to children within middle childhood (6-12 years-old). User profile creation does not explicitly include gender, and the video suggestion algorithm is private, so through this "ghost user" process, I approximated what any child within the United States who is using YouTube Kids for the first time might be offered to watch. YouTube Kids delineates videos into four categories: Reading, Shows, Music, and Explore. When selected, each category suggests thirty-six videos. I selected the first five recommended videos from each category, as indicated by their order on the browsing pages. These five videos were chosen equally from each user, with two being from the younger user, two being from the older user, and the fifth video appearing in the top three recommended videos for both age groups, for a total of 20 videos.

2 Coding Processes

I created two ghost users (one in the 5 to 8 years-old group and one in the 9 to 12 years-old group) to include videos that would be recommended to children within middle childhood (6-12 years-old) for coding. User profile creation does not explicitly include gender, and the video suggestion algorithm is private, so through this "ghost user" process, I approximated what any child within the United States who is using YouTube Kids for the first time might be offered to watch. YouTube Kids delineates videos into four categories: Reading, Shows, Music, and Explore. When selected, each category suggests thirty-six

videos. I selected the first five recommended videos from each category, as indicated by their order on the browsing pages. These five videos were chosen equally from each user, with two being from the younger user, two being from the older user, and the fifth video appearing in the top three recommended videos for both age groups, for a total of 20 videos.

2.1 Gender Presentation

Appendix A includes an overview of the gender content coding scheme. Access to a full copy of this coding scheme is available through contact of the author. Each video received an overall code based on all content, including video title, description, subject matter, gender presentation of characters, and color stereotypes. The overall code categories were (a) completely feminine; (b) mainly feminine with some masculinity; (c) equally feminine and masculine; (d) no gender-typed content; (e) mainly masculine with some femininity; or (f) completely masculine. As noted above, two independent coders coded all videos. Interrater reliability was satisfactory ($\kappa = .83$).

Furthermore, each character was coded for its category of being and gender presentation. Characters were included in coding if any part of their being was visually present visually in the video, or if their voice was heard audibly in the video (I.e., a narrator whose voice is distinct and unexplained by any of the other characters). The categories of being—human, humanoid, animal, and being—were adopted from the work of The Jel Sert Company & Geena Davis Institute on Gender in Media (n.d.). All categories of being were considered for both animated and live-action characters. Characters were considered human if they appeared to be *Homo sapiens.* Humanoid characters included any non-living thing that has been given human characteristics. This code incorporated a wide variety of characters,

including planets with smiley faces and robots with human faces. The animal category included real and mythical animals, and characters within this category ranged from cartoon dragons to pet hamsters. Finally, the being category incorporated any other characters that could be classified as "being" or an entity but did not fit within any of the other three categories. Interrater reliability was satisfactory for categorization of being ($\kappa = .94$).

Gender presentation of each character was coded as (a) unambiguously feminine; (b) both masculine and feminine (also known as androgynous); (c) neither feminine nor masculine (also called non-gendered); or (d) unambiguously masculine. The gender presentation of each character was evaluated based on numerous factors: physical appearance (including bodily representation, clothing style, and color schemes), verbal information (including pitch of voice, pronoun usage, and content of verbalizations), and role/activity stereotypes. Some pertinent aspects of a character's bodily representation could be presence of sex-typed body parts, obvious make-up, significant upper-body musculature, or pronounced eyelashes and lips. Bodily representation was especially important for characters that were presented as animals: if the animal character had obvious sex-specific indicators (I.e., a male lion has a long mane, while a female lioness lacks this indicator), then that would be included in considerations for that character's gender presentation. Clothing that was considered gendered included dresses and skirts. These outlined gendered components were not exhaustive but were useful for directing coders' attention towards relevant components of gender characterizations that had been previously used in other research (England et al., 2011; Karniol, 2011; Martin, 2017; Oliver & Green, 2001; Picariello et al., 1990). Specifically including androgynous and non-gendered categories of gender presentation as well as

unambiguously feminine and unambiguously masculine categories better captured the variety of characters in these videos and represented a more nuanced conception of gender. As noted above, two independent coders coded all characters. Interrater reliability was satisfactory (κ = .84).

2.2 Emotion

Appendix B includes an overview of the emotion content coding scheme. Access to a full copy of this coding scheme is available through contact of the author. Each video received two codes for overall emotionality, one for positive emotions and one for negative emotions. Emotionality was coded as both positive and negative because the different valences of emotional expression are distinct. Positive and negative emotionality were separately coded utilizing a three-point Likert scale (0-2) to indicate their presence and level. As noted above, two independent coders coded all videos. Interrater reliability was satisfactory for video-level positive emotionality (ICC = .83) and for video-level negative emotionality (ICC = .79).

Emotion coding for each character utilized a three-point Likert scale (0-2) to indicate the presence and level of prototypical emotions: pride, love, excitement, happiness, positive surprise, negative surprise, fear, shame/guilt, anger, and sadness/distress. This list of typical emotions was chosen based on the work of Scherer (2005), which indicates these ten emotions are commonly expressed and understood. Emotional expressions included verbal, behavioral, and symbolic representations of the previously listed emotions. Based on skewness for some emotions, after coding using the original Likert-type scale was completed I also calculated a dichotomous adaptation of the scale that reflected presence (rating of 1 or 2) or absence (rating of 0) of the emotion being expressed by each character.

As noted above, two independent coders coded all characters. ICCs were calculated for the original Likert-type scale to assess interrater reliability. Satisfactory interrater reliability using the three-point Likert scale was achieved for excitement (ICC = .77), happiness (ICC = .79), positive surprise (ICC = .78), negative surprise (ICC = .75), anger (ICC = .76), fear (ICC = .82), and sadness/distress (ICC = .73). Interrater reliability was not achieved for shame/guilt (ICC = .66), pride (ICC = .55) and love (ICC = .49). Accordingly, analyses with the three-point Likert scale used only excitement, happiness, and positive surprise as positive emotions, and only anger, fear, sadness/distress, and negative surprise as negative emotions.

For the dichotomous adaptation of the scale into presence/absence categories, Cohen's kappa was calculated to assess interrater reliability. Satisfactory interrater reliability using the presence/absence categorization was found for positive surprise ($\kappa = .65$), fear ($\kappa = .60$), sadness/distress ($\kappa = .65$), and shame/guilt ($\kappa = .66$). Interrater reliability for the presence/absence categorization was not satisfactory for negative surprise ($\kappa = .58$), happiness ($\kappa = .55$), anger ($\kappa = .54$), excitement ($\kappa = .47$), pride ($\kappa = .37$) and love ($\kappa = .31$). Based on all coders' reflections during the coding process, I decided to test a combination of excitement and happiness expressions due to their similarities in expression and because excitement can be understood as a more intense form of happiness. Cohen's kappa for presence/absence for the excitement/happiness composite was satisfactory ($\kappa = .85$). Accordingly, analyses with the presence/absence categorization used only the excitement/happiness composite and positive surprise as positive emotions, and only fear, sadness/distress, and shame/guilt as negative emotions. For the sake of completeness, I report descriptive analyses with the

presence/absence categories for negative surprise, happiness alone, excitement alone, anger, pride and love, but they were not used when testing hypotheses.

I conducted one set of analyses with the three-point Likert scale codes and one set with the presence/absence codes. After coding, I composited emotions in two different subsets to address hypotheses. First, emotions were categorized by valence into positive and negative emotions as noted above for each set of codes. Scores were averaged within positive emotions and within negative emotions to form the two composite scores for each set of analyses.

I had intended to categorize ego-focused emotions (pride and anger) and other-focused emotions (love and shame/guilt). However, low interrater reliability for pride and love prevented creating composite scores to test hypotheses for ego-focused vs other-focused emotions. Instead, I descriptively report character gender presentation in relation to presence/absence of anger and shame/guilt (as well as the other emotions that were coded).

3 Analytic Strategy

The first hypothesis is that videos on YouTube Kids would contain more positive emotions than negative emotions, and video characters would express more positive emotions than negative emotions. This hypothesis was assessed in two ways. First, I conducted a paired t-test comparing video positive emotionality and negative emotionality ratings. Second, I conducted a paired t-test comparing characters' positive emotion and negative emotion composite scores. As stated above, character-level statistical analyses were conducted twice, once with emotions coded using the original Likert-type scale and once with emotions coded using a presence/absence categorization.

The second hypothesis tested whether gender patterns of emotion socialization were present in YouTube Kids media. I expected that the videos displaying more feminine content would contain more emotion socialization for positive emotions, whereas the videos displaying more masculine content would contain more emotion socialization for negative emotions. At the video level, this research question was assessed using a repeated measures ANOVA with the video level gender rating as the independent variable and the video level positive and negative emotionality scores as the repeated dependent variables. At the character level, I conducted a repeated measures ANOVA with the gender presentation of characters as the independent variable and the composite scores for presence of positive and negative emotions as the repeated dependent variables. Again, character-level statistical analyses were conducted twice, once with emotions coded using the original Likert-type scale and once with emotions coded using a presence/absence categorization.

Exploratory post-hoc analyses explored how video category (reading, shows, explore, and music) and age-group (younger, older, and both) might relate to character's emotional expressions. I first conducted chi-square analyses to determine whether presence/absence of each emotion was associated with video category or age-group. Then, I conducted a repeated measures ANOVA with the character gender presentation, age group, and video category as independent variables, and positive vs negative expressions of emotions as the repeated dependent variables, to examine whether age group and video category were associated with positive and negative emotions after accounting for character gender presentation. As above, this repeated measures ANOVA was conducted twice, once with emotions coded using the

original Likert-type scale and once with emotions coded using a presence/absence categorization.

RESULTS

1 Descriptive Analyses

1.1 Video-level Information

Although video level gender ratings included six categories (completely masculine, completely feminine, mainly masculine with some femininity, mainly feminine with some masculinity, equally feminine and masculine, and no gendered content), the videos coded were only considered mainly masculine with some femininity (N = 7), mainly feminine with some masculinity (N = 4), or equally feminine and masculine (N = 9) (see Figure 1). There were no videos containing entirely one gender, nor videos lacking gender content.

The positive emotionality scores for the videos ranged from no positive emotion included (N =1), some positive emotion included (N = 9), and a lot of positive emotion included (N = 10) (See Figure 2). Similarly, negative emotionality was coded as none included (N = 4), some included (N = 13), and a lot included (N = 3) (See Figure 3). Cross tabulation shows the relation between video gender category and emotion global ratings (See Table 1). In all gender categories, most videos contained some negative emotionality. Positive emotionality, however, was more often coded at the highest level when the video was equally feminine and masculine or mainly feminine.

Table 1: Level of Positive & Negative Emotionality by video-level Gender Global Rating

	Level of Emotionality							
Gender Global Rating	No Positive Emotionality	Some Positive Emotionality	Lots of Positive Emotionality	Total	No Negative Emotionality	Some Negative Emotionality	Lots of Negative Emotionality	Total
Mainly Masculine with Some Femininity	1	5	1	7	0	6	1	7
	14.29%	71.43%	14.29%	35%	0.00%	85.71%	14.29%	35%
Equally Feminine and Masculine	0	3	6	9	3	4	2	9
	0.00%	33.33%	66.66%	45%	33.33%	44.44%	22.22%	45%
Mainly Feminine with Some Masculinity	0	1	3	4	1	3	0	4
	0.00%	25.00%	75.00%	20%	25%	75%	0.00%	20%

Figure 1: Video Gender Rating Categorizations (N = 20)

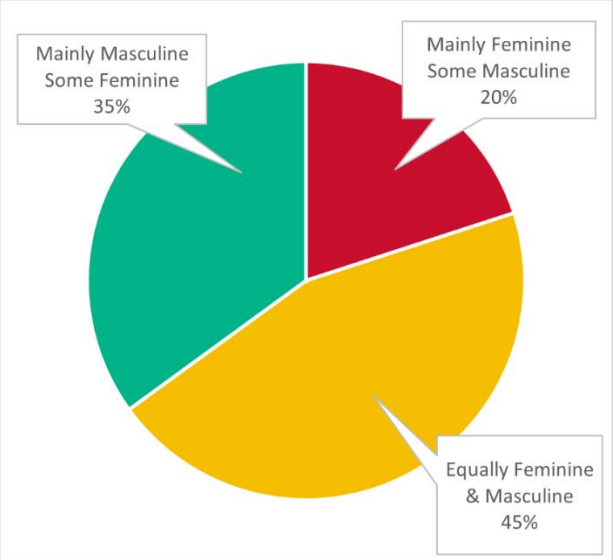


Figure 2: Video Positive Emotion Global Rating (N = 20)

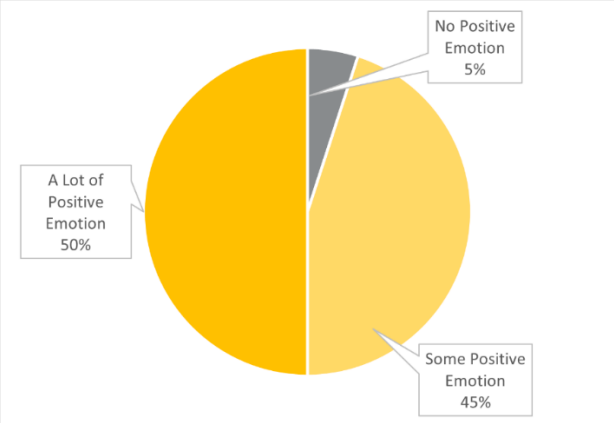
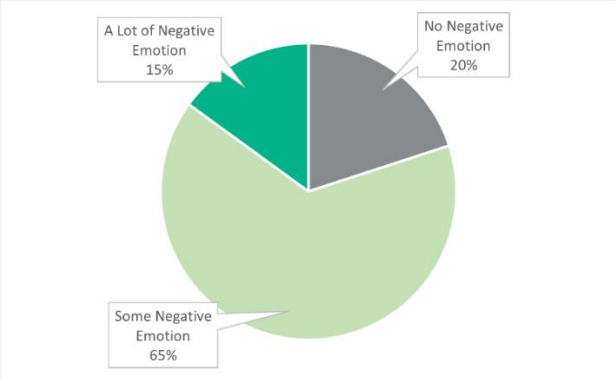


Figure 3: Video Negative Emotion Global Rating (N = 20)



1.2 Character-level Information

1.2.1 Character Gender Presentation

Among the twenty videos, there were 302 total characters. Table 2 details the breakdown of characters according to their gender presentation and their category of being. Feminine (N = 117) and masculine (N = 119) characters represented the largest categories, while androgynous (N = 21) and non-gendered (N = 45) characters collectively represented less than a third of the characters. There were 221 human characters, 49 animal characters, 23 humanoid characters, and only 5 characters constituting the "being" category.

Table 2: Descriptors of Characters included in the Sample

	Feminine	Androgynous	Non-gendered	Masculine	Total
Human	103	16	10	96	221
Humanoid	4	4	6	9	23
Animal	8	1	26	14	49
Being	2	0	3	0	5
Total	117	21	45	119	

1.2.2 Emotional Expressions

Within the twenty videos there were 425 emotional expressions coded. Positive emotions (N = 346), including pride, love, excitement, happiness, and positive surprise, occurred more frequently than negative emotions (N = 79), including negative surprise, fear, anger, shame/guilt, and sadness/distress. Happiness was the most common emotion (N = 169), followed by excitement (N = 113), then positive surprise (N = 31), negative surprise (N = 29), fear and pride (N = 18), love (N = 15), anger (N = 14), sadness/distress (N = 11), and shame/guilt (N = 7). See Table 3 for expanded descriptive statistics of all emotional expressions coded.

Table 3: Descriptive Statistics of Emotional Expressions

	Descriptive Statistics				
	Absence/Presence Scale	Orignal 0-2 Scale			
Protoypical Emotions	Percent of characters with emotion present	M	SD	Skewness	Kurtosis
Positive Emotions	N = 302				
Pride	5.96	0.063	0.257	4.2	18.26
Love	4.97	0.05	0.218	4.17	15.46
Excitement	37.42	0.447	0.628	1.09	0.11
Happiness	55.96	0.656	0.647	0.48	-0.69
Positive Surprise	10.26	0.103	0.304	2.63	4.96
Negative Emotions					
Negative Surprise	9.6	0.109	0.352	3.39	11.66
Shame/Guilt	2.32	0.023	0.151	6.37	38.83
Anger	4.64	0.06	0.288	5.26	28.86
Fear	5.96	0.073	0.307	4.58	21.92
Sadness/Distress	3.64	0.046	0.254	6.01	38.23

Note: Pride and Love did not have satisfactory interrater reliability and were not included in either analysis. Excitement, negative surprise, and anger did not have satisfactory interrater reliability for the presence/absence scale, so they were not included in that analysis.
Shame/guilt did not have satisfactory interrater reliability for the 0-2 Likert scale, so it was not included in that analysis.

For the analysis using the 3-point Likert scale, 230 characters expressed the included emotions. Positive emotions, including excitement, happiness, and positive surprise, were expressed by 215 characters. Positive emotion expressions occurred more frequently than negative emotions, which were expressed by 51 characters and included negative surprise, fear, anger, and sadness/distress.

For the analysis using the presence/absence categorization, 183 characters expressed the included emotions. Positive emotions, including the excitement/happiness composite and positive surprise, were expressed by 178 characters. Positive emotion expressions occurred

more frequently than negative emotions, which were expressed by 17 characters and are comprised of fear, sadness/distress, and shame/guilt.

1.2.3 Gender Presentation and Emotional Expression Cross-Tabulations

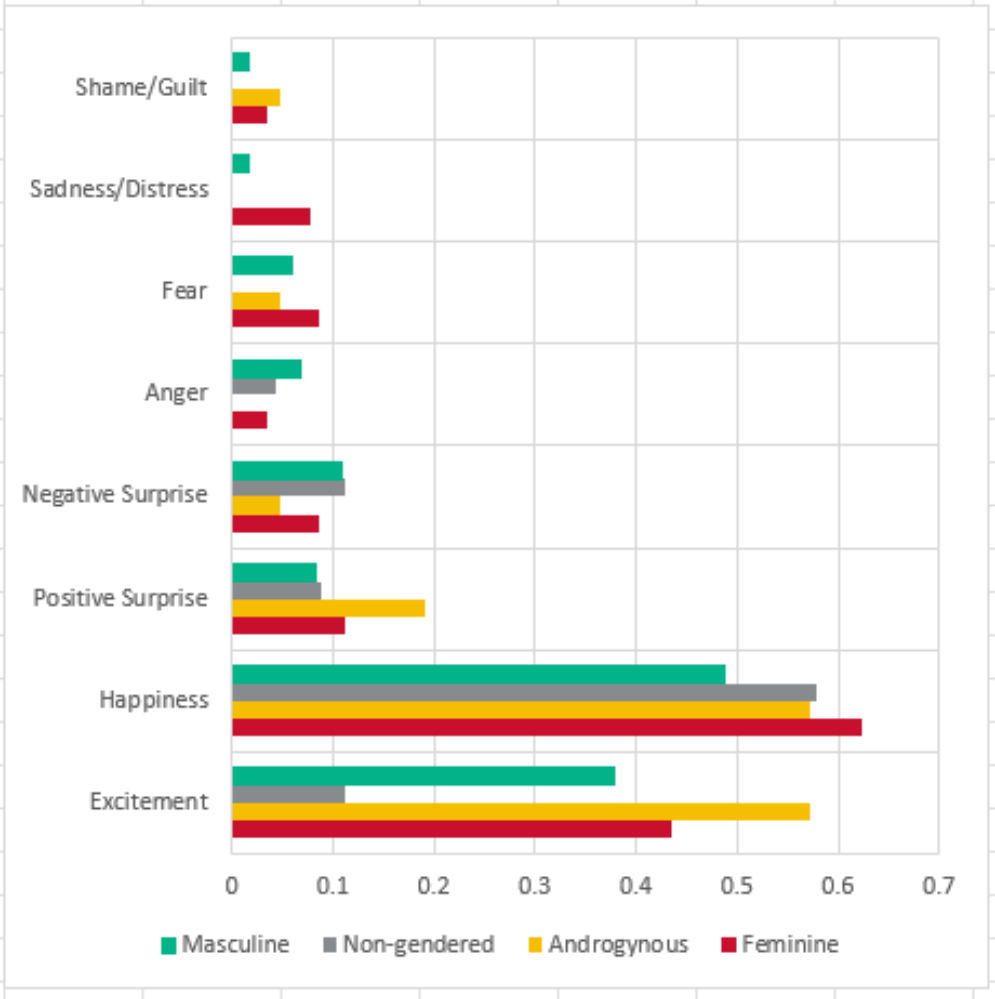
Cross tabulation shows the number and proportion of characters expressing emotions according to character gender presentation (See Table 4). Feminine characters were more likely to show excitement than all other gender presentation categories ($X2$ (3, N = 302) = 18.7, p = .000). However, for the excitement/happiness composite there was no significant difference in according to gender presentation ($X2$ (3, N = 302) = 3.4, p = .333). Additionally, there was a significant difference according to gender presentation in sadness/distress emotional displays, with feminine characters displaying more sadness/distress than expected ($X2$ (3, N = 302) = 9.3, p = .026). There were no other significant findings using the chi-square analysis. All emotions were displayed at least once by a character within each gender presentation group, except shame/guilt and fear for non-gendered characters, and anger for androgynous characters.

Table 4: Presence of Emotional Expressions by Character Gender Presentation

	Gender Presentation of Characters				
Emotional Expressions	**Unambiguously Masculine**	**Equally Masculine and Feminine**	**Unambiguously Feminine**	**Non-Gendered**	**Total**
Positive Emotions					
Pride*	8	2	7	1	18
	44.44%	11.11%	38.89%	5.6%	5.2%
Love*	5	0	11	0	15
	33.33%	0.00%	73.33%	0.0%	4.3%
Excitement	45	12	51	5	113
	39.82%	10.62%	45.13%	4.4%	32.7%
Happiness	58	12	73	26	169
	34.32%	7.10%	43.20%	15.38%	48.82%
Positive Surprise	10	4	13	4	31
	32.36%	12.90%	41.94%	12.90%	8.96%
Negative Emotions					
Negative Surprise	13	1	10	5	29
	44.83%	3.45%	34.48%	17.24%	36.71%
Shame/Guilt	2	1	4	0	7
	28.57%	14.29%	57.14%	0.00%	8.86%
Anger	8	0	4	2	14
	57.14%	0.00%	28.57%	14.29%	17.72%
Fear	7	1	10	0	18
	38.89%	5.56%	55.56%	0.00%	22.78%
Sadness/Distress	2	0	9	0	11
	18.18%	0.00%	81.82%	0.00%	13.92%

Note: Pride and Love did not have satisfactory interrater reliability and were not included in either analysis.
Excitement, negative surprise, and anger did not have satisfactory interrater reliability for the presence/absence scale, so they were not included in that analysis.
Shame/guilt did not have satisfactory interrater reliability for the 0-2 Likert scale, so it was not included in that analysis.

Figure 4: Proportion of Characters who displayed Prototypical Emotions (N=302)



Note: Pride and Love did not have satisfactory interrater reliability and were not included in either analysis.
Excitement, negative surprise, and anger did not have satisfactory interrater reliability for the presence/absence scale, so they were not included in that analysis.
Shame/guilt did not have satisfactory interrater reliability for the 0-2 Likert scale, so it was not included in that analysis.

2 Hypothesis 1: Videos on YouTube Kids Will Contain More Positive Emotions Than Negative Emotions

2.1 Video-level Analysis

The first hypothesis is that videos on YouTube Kids would contain more positive emotions than negative emotions, and video characters would express more positive emotions than negative emotions. This hypothesis was assessed in two ways. First, I conducted a paired t-test comparing video positive emotionality and negative emotionality ratings (t (19) = 2.36,

$p = 0.03$). There was a significant difference, with positive emotionality being higher. See Table 5 for the average video level emotionality ratings for both positive and negative emotions by the video level gender presentation. Using the three-point Likert scale to indicate presence and intensity of emotionality, videos that were rated as mainly feminine or equally masculine and feminine appeared to have more intense positive emotionality than those rated as mainly masculine. Videos rated as mainly masculine had more intense negative emotionality than those rated as mainly feminine or equally masculine and feminine.

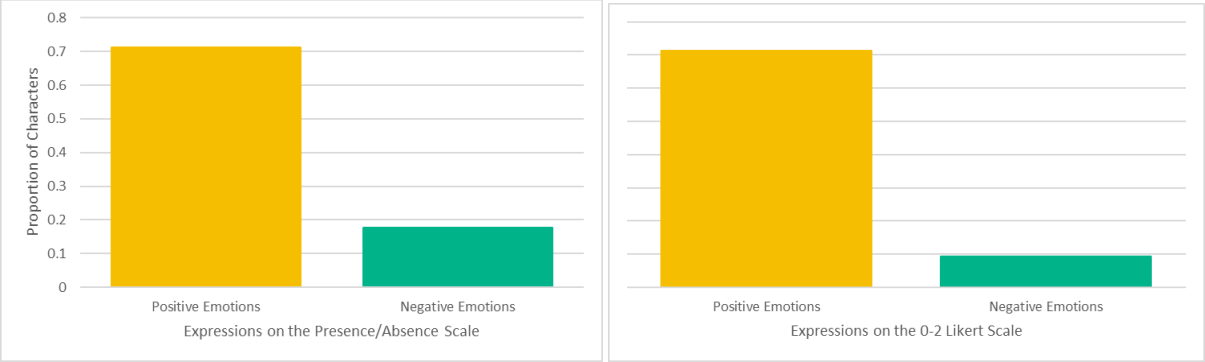
Table 5: Average Video Level Emotionality Ratings by Video Level Gender Rating

	Video level Emotionality (0-2 scale)			
Video Gender Rating	**Average Positive Emotionality**		**Average Negative Emotionality**	
	M	**SD**	**M**	**SD**
Mainly Masculine with Some Femininity	1	0.58	1.14	0.38
Equally Masculine and Feminine	1.67	0.5	0.89	0.78
Mainly Feminine with Some Masculinity	1.75	0.5	0.75	0.5
Total	1.45	0.6	0.95	0.6

2.2 Character-level Analysis

I tested the hypothesis of gender patterns in emotional displays at the character level by conducting a paired t-test comparing characters' positive emotion and negative emotion composite scores. When using the Likert scale codes, this t-test showed a significant difference in the number of positive emotions displayed compared to the number of negative emotions displayed (t (301) = 14.84, $p < .000$). When using the presence/absence codes, there was also a significant difference between the positive and negative emotions displayed (t (301) = 21.62, $p < .000$). Positive emotions were displayed significantly more than negative emotions (see Figure 5).

Figure 5: Proportion of Characters who displayed Positive and Negative Emotions



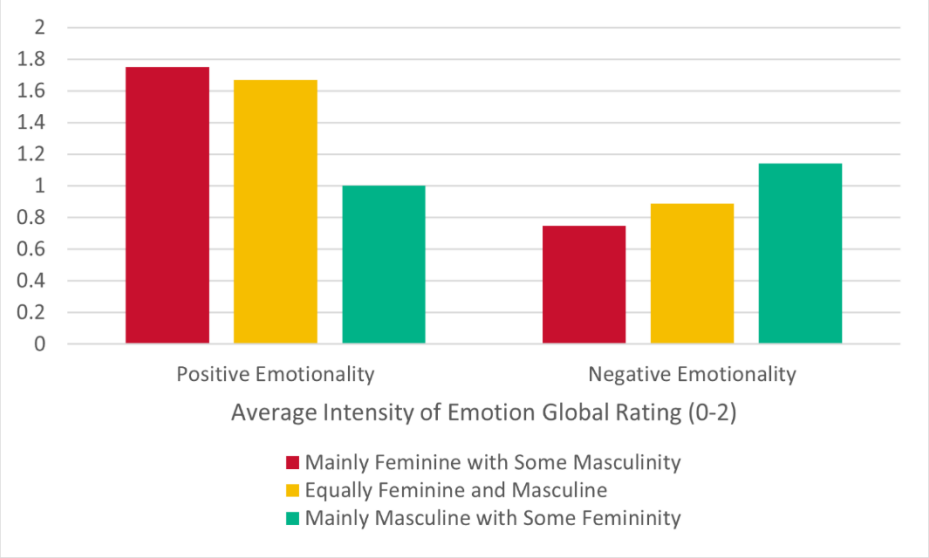
3 Hypothesis 2: Gendered Patterns of Emotionality Will Be Present in YouTube Kids Media

3.1 Video-level Analysis

I conducted a repeated measures ANOVA with the video level gender rating as the independent variable and the video level positive and negative emotionality scores as the repeated dependent variables to test whether positive and negative emotionality ratings varied according to video level gender rating. There was a significant within-subjects effect for positive vs negative emotionality, F (1, 17) = 7.26, Wilks' lambda = 0.70, p = .015, again showing that videos received higher positive emotionality global ratings than negative emotionality global ratings. The between-subjects effect of video gender rating was not significant, p = .556. There was a non-significant trend for video gender rating to interact with the within-subjects factor of positive vs negative emotionality, F (2, 17) = 3.14, Wilks' lambda = 0.73, p = .069. Though this finding must be interpreted with caution, this trend suggests that the disparity between positive emotionality and negative emotionality differed according to the video's gender rating. In both the mainly feminine with some masculinity and the equally masculine and feminine video categories, emotional global ratings were higher for positive than negative emotionality. Only within the mainly masculine with some

femininity video categories were the emotion global ratings slightly higher for negative rather than positive emotionality (See Figure 6).

Figure 6: Average Intensity of Emotion Global Ratings by Video-level Gender Rating

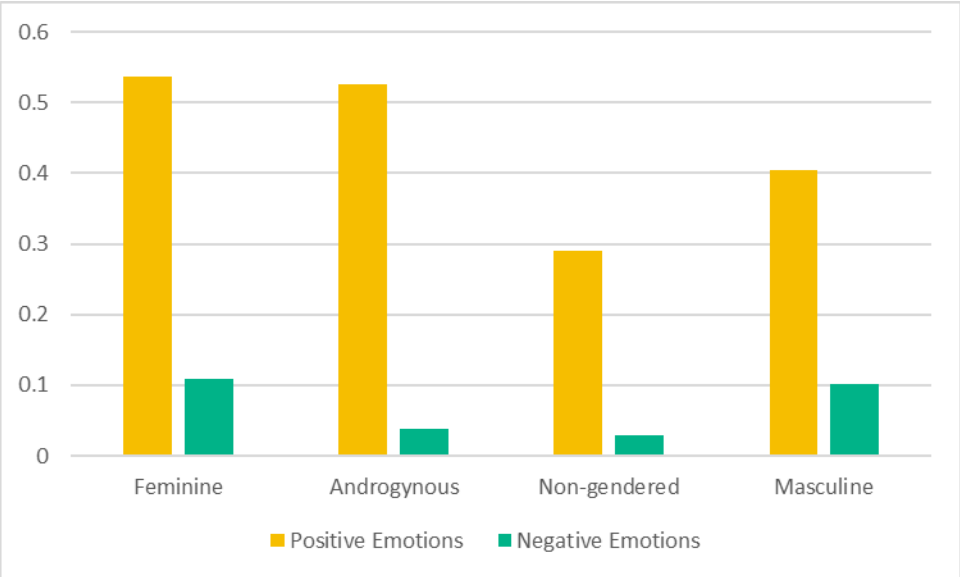


3.2 Character-level Analysis

Analyses at the character level examined how gender presentation might relate to the emotions expressed by characters. Two repeated measures MANOVAs were conducted, one with the Likert scale codes for emotion expression and one with the presence/absence codes for emotion expression. For the Likert scale codes, the following emotions were composited as positive emotions (positive surprise, excitement, and happiness) and negative emotions (negative surprise, anger, fear, and sadness/distress). For the presence/absence codes, the following emotions were composited as positive emotions (excitement/happiness composite and positive surprise) and negative emotions (fear, sadness/distress, and shame/guilt). For both MANOVAs, the between-subjects predictor was character gender presentation and the within-subjects factor was emotion valence (positive vs negative).

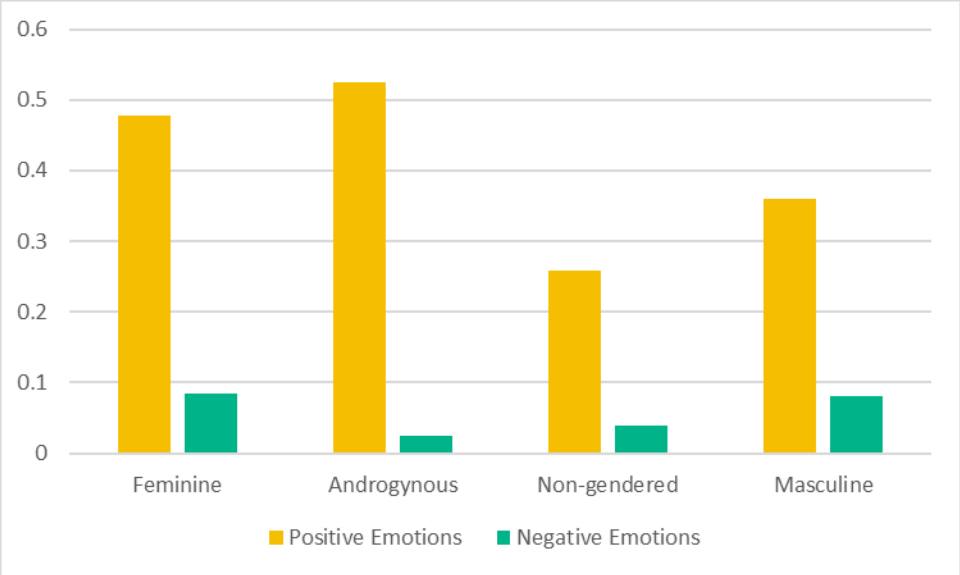
For the Likert scale codes, there was a significant between-subjects effect of character gender presentation (F (3, 298) = 3.67, p = .013), a significant within-subjects effect of emotion valence (F (1, 298) = 155.00, Wilks' lambda = 0.66, p < .000), and a significant interaction of character gender presentation with emotion valence (F (3, 298) = 4.46, Wilks' lambda = 0.96, p = .004). This interaction means that expression of positive and negative emotions varies according to the gender presentation of the characters. Follow-up contrasts showed that feminine characters displayed more positive emotions than non-gendered and masculine characters, and androgynous characters displayed more positive emotions than non-gendered characters (ps < .05) (See Figure 7 for least square means of emotional expressions according to the Likert Scale codes). There were no significant differences in display of negative emotions according to character gender presentation (ps > .18).

Figure 7: Least Square Means of Emotions according to Character Gender Presentation (according to the Likert Scale codes)



For the presence/absence codes, the between-subjects effect of character gender presentation was not significant (F (3, 298) = 2.09, p = .102). The within-subjects effect of emotion valence was significant, confirming the significant difference between the positive and negative emotions expressed (F (1, 298) = 296.18, Wilks' lambda = 0.50, p < .000). The interaction of character gender presentation with emotion valence was not significant, meaning that the difference between expression of positive and negative emotions did not vary according to the gender presentation of the character (F (3, 298) = 0.29, Wilks' lambda = 1.00, p = .831) See Figure 8 for least square means of emotional expressions according to the presence/absence codes.

Figure 8: Least Square Means of Emotions according to Character Gender Presentation (according to the presence/absence codes)



4 Exploratory Analyses

Exploratory post-hoc analyses explored whether video category (reading, shows, explore, and music) and age-group might, along with character gender presentation, relate to positive and negative emotional expressions. These analyses were not incorporated into the original research questions, as there was no theoretical basis to suggest there might be differences based on these categories. After the coding process was complete, however, coders thought there might be patterns worth exploring further. I first conducted chi-square analyses examining whether presence/absence of each emotion was associated with video category or age-group. I conducted these analyses for all 10 emotions that were coded, though results for negative surprise, happiness, excitement, anger, pride and love must be interpreted with great caution because interrater reliability was not satisfactory. Then, I conducted two repeated measures ANOVAs (one for the Likert-type codes, one for the presence/absence codes) with the character gender presentation, age group, and video category as independent

variables, and the expressions of positive and negative emotions as the repeated dependent variables. For the Likert scale codes, the following emotions were composited as positive emotions (positive surprise, excitement, and happiness) and negative emotions (negative surprise, anger, fear, and sadness/distress). For the presence/absence codes, the following emotions were composited as positive emotions (excitement/happiness composite and positive surprise) and negative emotions (fear, sadness/distress, and shame/guilt). For both MANOVAs, the between-subjects predictor was character gender presentation and the within-subjects factor was emotion valence (positive vs negative).

4.1 Age Group Differences

Chi-square analyses revealed age group differences for positive and negative surprise and anger (See Figures 9-11). Positive surprise was displayed by characters more than expected in videos that were included in both age groups ($X2$ (2, N = 302) = 19.3, $p < .000$). Alternatively, negative surprise was displayed by characters more than expected within the young category, which included videos recommended for six- to nine-year-old children ($X2$ (2, N = 302) = 20.6, $p < .000$). Furthermore, anger was also displayed by characters more than expected within the young category ($X2$ (2, N = 302) = 7.9, $p = .020$). There were no other significant findings concerning the proportion of emotions displayed according to video age group category.

Figure 9: Chart of Observed and Expected Positive Surprise

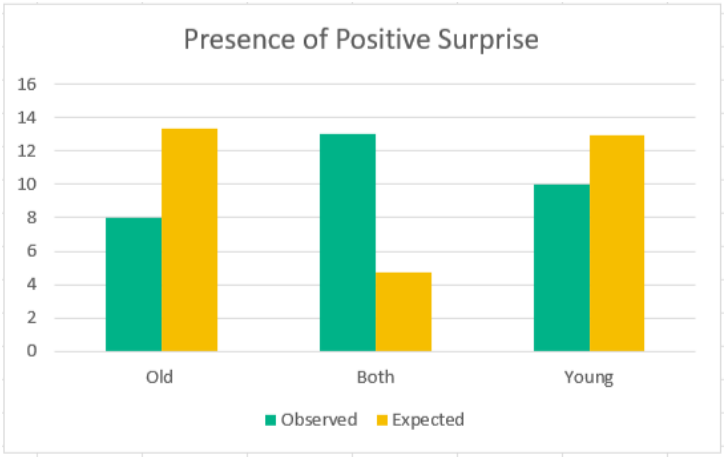


Figure 10: Chart of Observed and Expected Negative Surprise

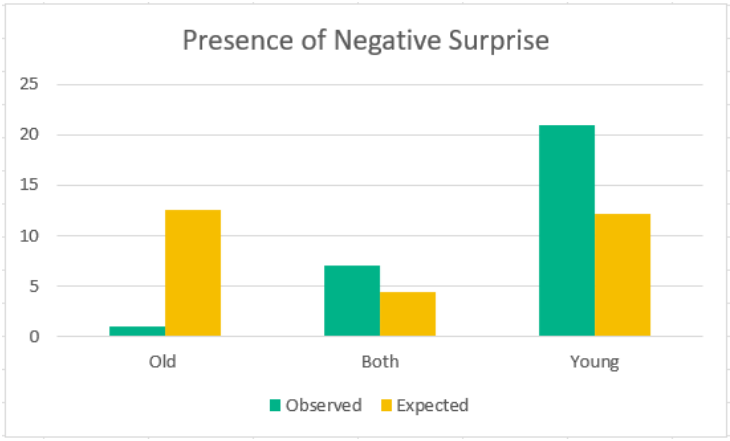
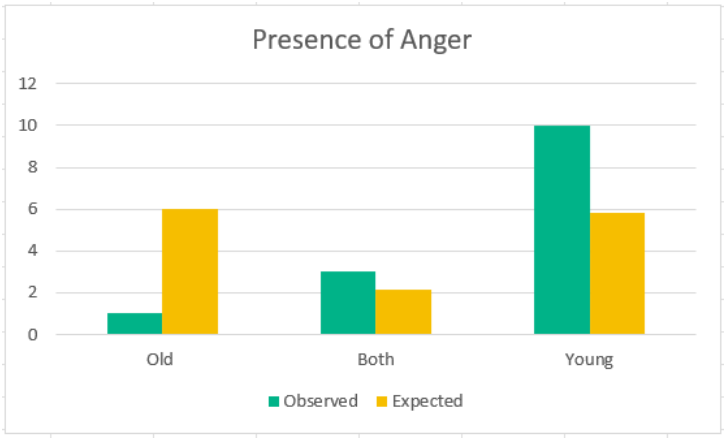


Figure 11: Chart of Observed and Expected Anger



For the Likert-type scale codes, the repeated-measures ANOVA showed a significant between-subjects difference in overall emotionality according to age group of video recommendation (F (2, 293) = 6.60, p = .004). The interaction between valence of emotion expressed and age group was not significant (F (2, 293) = 1.36, Wilks' lambda = 0.99, p = .258. Characters in the videos solely for the younger age range (5-8 years-old) and for both age ranges expressed more positive emotions and more negative emotions compared with those solely for the older age range (9-12 years-old). See Figure 12 for the least square means of positive and negative emotionality that demonstrates this video age group difference.

For the presence/absence codes, the repeated-measures ANOVA also showed a significant between-subjects difference in overall emotionality according to age group of video recommendation (F (2, 293) = 4.85, p = .009). There was also a significant interaction between valence of emotion expressed and age group (F (2, 293) = 5.56, Wilks' lambda = 0.96, p = .004). Follow-up contrasts showed that video characters displayed more positive emotions in videos that overlapped both age groups compared with those solely for the older age range (9-12 years-old) and with those solely for the younger age range (5-8 years-old; ps < .01). Characters in videos solely for the younger age range displayed more negative emotions compared with those solely for the older age range, p = .014. In combination with the chi square results, the higher than expected negative emotion displays in videos recommended for the younger age group could contain specifically more anger and negative surprise. See Figure 13 for the least square means of positive and negative emotionality that demonstrates these video age group differences. In general, the combined results from these

post-hoc analyses suggest that presence of emotional modeling for both positive and negative emotions in YouTube Kids videos may decrease as age increases.

Figure 12: Least Square Means of Positive and Negative Emotions by Video Age Group (according to Likert Scale Codes)

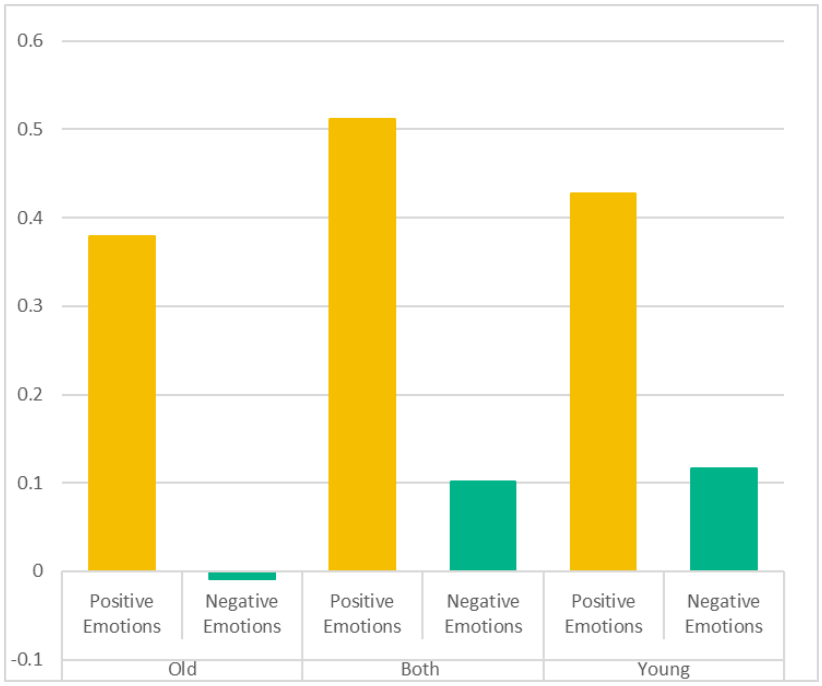
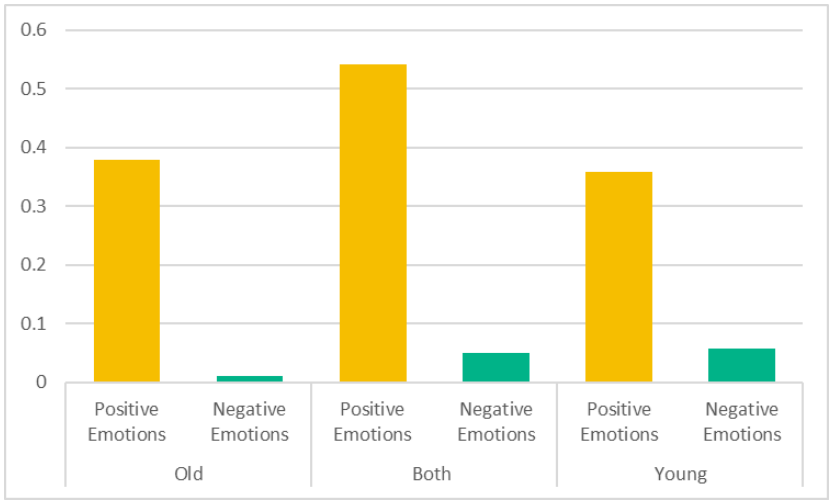


Figure 13: Least Square Means of Positive and Negative Emotions by Video Age Group (according to Presence/Absence Codes)



4.2 Category Differences

Chi-square analyses revealed video category differences for excitement and positive surprise (See Figures 14 and 15). Characters in videos in the Show category displayed more expressions of excitement than expected ($X2$ (3, N = 302) = 9.8, p = .021). This finding did not hold for the excitement/happiness composite ($X2$ (3, N = 302) = 3.1, p = .377). Positive surprise was displayed more often than expected by characters in videos that were included in the Explore category ($X2$ (3, N = 302) = 14.8, p = .002). There were no other significant findings concerning the proportion of emotions displayed according to video category.

Figure 14: Chart of Observed and Expected Excitement

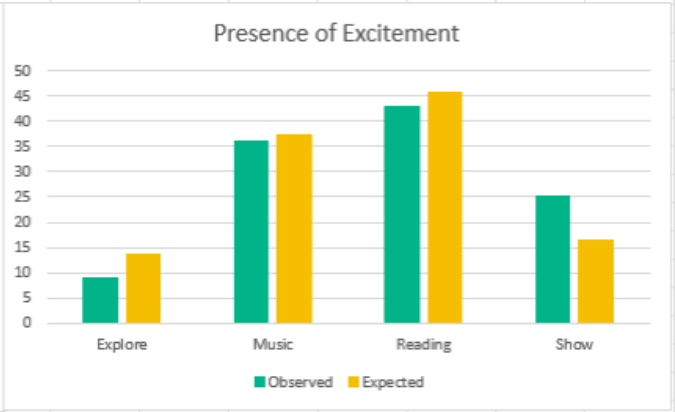
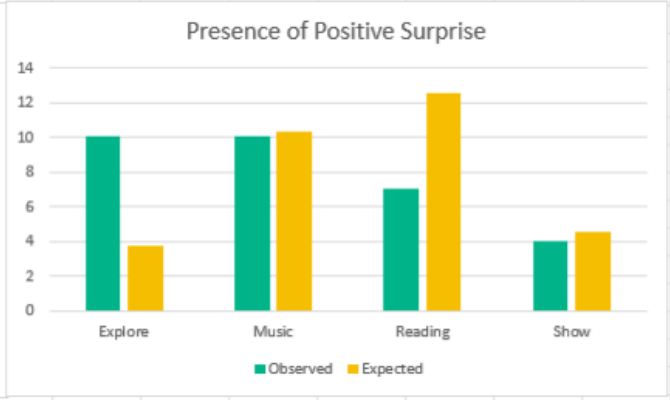


Figure 15: Chart of Observed and Expected Positive Surprise

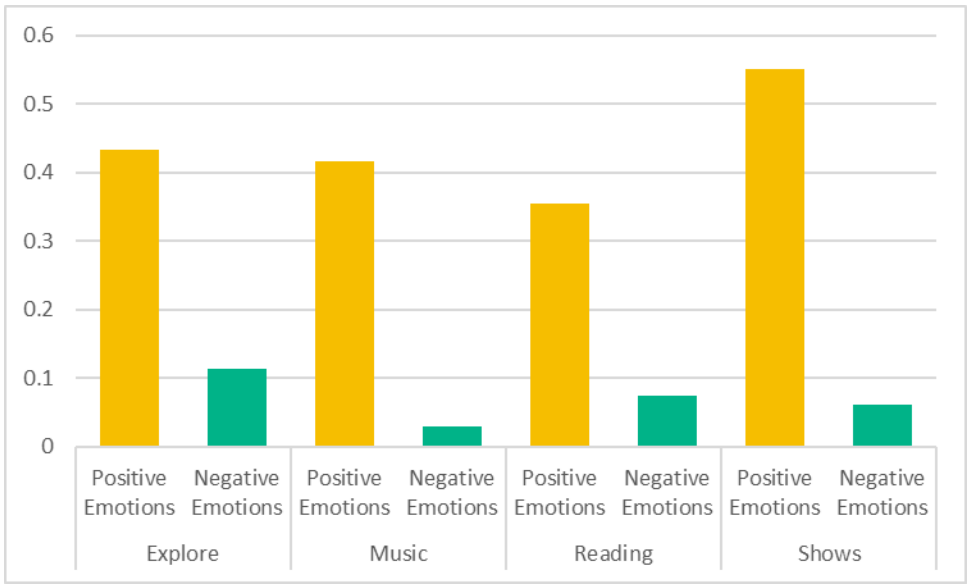


For the Likert-type scale codes, results of the repeated-measures ANOVA showed no between-subjects effect of video category (F (3, 293) = 1.58, p = .195). However, there was a significant interaction of video category with emotion valence (F (3, 293) = 3.74, Wilks' lambda = 0.96, p = .012). Follow-up contrasts showed that characters displayed positive emotions more in videos in the Show category compared with those in the Reading category (p = .006), and negative emotions more in videos in the Explore category compared with those in the Music category (p = .047). See Figure 16 for the least square means of positive and negative emotionality that demonstrates these video category differences.

For the presence/absence codes, results of the repeated-measures ANOVA showed no between-subjects effect of video category (F (3, 293) = 0.41, p = .748). The interaction of video category with emotion valence was also not significant (F (3, 293) = 1.11, Wilks' lambda = 0.99, p = .347).

In combination, these findings provide some evidence that specific emotions may be more prominent in some categories than others. Videos in the Show category had characters that displayed more excitement than expected. While this finding did not hold for the excitement/happiness composite, it could be explained by the explicit entertainment purpose of the videos included in the Show category. The characters in the Explore category displayed more positive surprise, which could be due to the video creators trying to draw in and maintain viewers' attention. In general, characters in videos on YouTube Kids largely express similar levels of positive and negative emotions regardless of the identified purpose of the video.

Figure 16: Least Square Means of Positive and Negative Emotions by Video Category (according to Likert Scale Codes)



DISCUSSION

1 Summary of Key Results

1.1 Analysis of Hypothesis

As YouTube Kids is a novel form of online entertainment, the first goal was to determine its viability as a source of emotion modeling. Within other contexts, parental and peer influences on emotional development include specific processes, so these were adapted and used to identify potential emotional content within the videos. I hypothesized that videos overall would have more positive emotionality than negative emotionality, and that video characters would express more positive emotions than negative emotions. The results supported this hypothesis: at the individual character level, positive emotions were displayed nearly four times more frequently than negative emotions and at the video level, there was a significant difference between the positive and negative emotionality global ratings. It is also likely that these positive emotions increase the popularity of the top recommended videos. Findings across all analytic approaches supported this hypothesis. Positive emotionality was expected to be more frequent than negative emotionality, because the videos included on YouTube Kids are child-directed and entertainment focused.

Furthermore, this project analyzed whether gendered patterns were evident in emotions displayed. I hypothesized that videos marketed for girls would contain more modeling of positive emotions, whereas videos marketed for boys would contain more modeling of negative emotions. This hypothesis was addressed by both a video level and an individual character level analysis. Initially, coders considered the entirety of each video for gender content. According to the gender categorization at the video level, there was a non-

significant trend for positive vs negative emotionality to differ according to video gender rating. Because this finding did not meet conventional significance criteria, it must be interpreted with caution. Nonetheless, this trend suggests that the disparity between positive emotionality and negative emotionality differed according to the video's gender rating, with the mainly masculine videos containing more evenly balanced positive and negative emotionality, whereas the mainly feminine and the equally masculine and feminine videos contained more positive than negative emotionality. Descriptive findings also suggested higher positive emotionality amongst feminine videos and higher negative emotionality amongst masculine videos. Because findings were not statistically significant, the video level analysis of gendered emotion display patterns did not support the second hypothesis. This could be influenced by the sampling method, as all the sample videos were selected at the same time without the potential intensifying effect of watching videos of a certain gender appeal and then being recommended further videos that are consistent with that gender appeal. It is possible the initially recommended videos were intentionally balanced in gender representations, in order to appeal to more viewers. It Is possible the expected gender patterns would be revealed in videos suggested for a viewer who had already watched some videos that are more likely to be viewed by a specific gender. Further research about the intensifying effect of watching videos on the content presented is necessary to explore this possibility further.

Findings according to the character level analysis revealed a similarly nuanced result. For the Likert scale codes, which included happiness and excitement separately, feminine characters displayed more positive emotions than non-gendered and masculine characters, and

androgynous characters displayed more positive emotions than non-gendered characters. There were no differences in negative emotions displayed according to character gender presentation. This finding supports the hypothesis because feminine characters, who are behavioral models for girls, displayed more positive emotions than non-gendered and masculine characters. Feminine characters, however, did not display more positive emotions than the androgynous characters, so the modeling of positive emotions is also presented for androgynous individuals. Both feminine and androgynous characters displayed more positive emotions than the non-gendered characters. These findings highlight how modeling of positive emotions differs according to the model's gender presentation.

For the presence/absence codes, which included an excitement/happiness composite, there were no significant differences in display of positive and negative emotions according to character gender presentations. Replication research with a larger sample of videos may yield increased interrater reliability for infrequent emotions and will be needed to further explore the gendered patterns of emotion displays in YouTube Kids videos. Interestingly, according to chi-square analyses, feminine characters displayed more sadness/distress than characters of other gender presentations. This is inconsistent with the hypothesis that videos for boys will contain more emotion socialization for negative emotions. This finding could be interpreted by considering the differences amongst negative emotions, which includes sadness/distress and anger. Sadness/distress was displayed more by feminine characters, but anger was expected to be displayed more by masculine characters. Sadness/distress is considered a vulnerable or submissive emotion, whereas anger is considered an aggressive or dominant emotion (Martin, 2017; Zeman et al. 2002). Potential gender differences in negative

emotionality could have also been difficult to detect due to the low frequency of negative emotions. Overall, results suggest that gendered patterns of emotions in YouTube Kids videos may reflect some cultural norms within the macrosystem that may influence gender and emotional development. The current findings suggest videos on YouTube Kids may perpetuate gender-stereotyped emotionality for feminine characters with regard to displaying more positive emotions and sadness/distress.

1.2 Gender Presentation and Emotion Concepts

While not directly related to this project's hypotheses, there were some interesting conclusions drawn from the coding process. Concerning gendered content, descriptive statistics suggests videos and characters available as models are represented equally amongst the masculine and feminine categorizations. At the video level of gendered content, videos were coded in the mainly feminine, mainly masculine, and equally feminine and masculine categories. There were no videos coded that fit within the completely feminine, completely masculine, or gender absent categories. This suggests that videos on YouTube Kids are generally not extreme in their presentations of masculine and feminine models. However, this may be influenced by the method of sampling. Because the videos were all chosen from the top recommended page, they may all contain relatively balanced levels of gender presentations to attract viewers of all genders, and thus descriptive results may not extend to other videos on the platform. Additionally, coders considered each character's gender presentation. Most characters were coded as either feminine (N = 117) or masculine (N = 119). Still, there were others who were distinctly non-gendered (N = 45) and some who were presented androgynously (N = 21). The range of character gender presentations suggests that

non-binary, nuanced presentations of gender are being included within YouTube Kids videos. It is also possible that these descriptive results reflect non-gendered characters (like animals) being relatively common within child-directed entertainment.

As noted above, androgynous characters displayed more positive emotion than non-gendered characters. Within the non-gendered category, most of the characters were animals, non-humans, or disembodied voices. Perhaps the absence of gender-typed characteristics in these characters accompanies other character qualities that imply a distance from humanity and the emotions connected to human expression.

Originally, I had hoped to find emotion socialization content in videos other than modeling of emotions, such as teaching about emotions or emotion coaching. An example of this would be a video containing a child telling their parent or caretaker about a scary thing that happened to them and the parent or caretaking encouraging the expression of those fearful feelings as well as using that opportunity to teach the child about ways to stay calm and get help. Although these other forms of emotion socialization were not well-represented in the sample for the current study, it is possible that some videos on YouTube Kids may include specific emotional learning and coaching content. There was only one video in the current sample that explicitly discussed emotions (specifically frustration) as well as mindfulness techniques to address them. Because of this lack of representation and the complex coding required to identify these concepts, emotion coaching was not explicitly coded in this project. More expansive research, including specific emotion coaching behaviors

and videos marketed with emotional content, could explore this aspect of emotion socialization further.

Like gender presentation, the emotional content in YouTube Kids videos was also conceptualized at the video and individual character levels. Half of the videos contained the highest level of positive emotion. This is consistent with the child-directed and entertainment focused nature of YouTube Kids media. Descriptive statistics suggested positive emotionality was more often coded as more intense or frequent when the video was equally feminine and masculine or mainly feminine. More than half of the videos also contained some negative emotionality, which suggests negative emotional content is present but at lower intensities or frequencies. The gender global rating was not related to video negative emotionality. By conceptualizing emotional content as a positive and negative global rating of each video, general conclusions about the overall content of a video were assessed. Specific emotional content was coded only when emotional expressions were modeled by characters.

At the individual character level, emotional content was conceptualized as distinct emotional expressions of ten prototypical emotions, pride, love, excitement, happiness, positive surprise, negative surprise, anger, fear, shame/guilt, and sadness/distress. Depending on the scale used for coding, several of these prototypical emotions did not reach satisfactory interrater reliability. Pride and love did not reach satisfactory interrater reliability with either the Likert scale or the presence/absence codes. Pride, love, and shame/guilt, which was not reliably coded using the Likert scale, were very rarely expressed, which likely contributed to coder differences in observations of these emotions. Additionally, both pride and love were conceptualized with numerous and varied behavioral and facial indicators, and this diversity

in expression could have contributed to insufficient reliability. For example, pride could be coded if a character placed their hands on their hips, crossed their arms over their chest, or raised their hands above their heads in a victorious pose. In the presence/absence coding, negative surprise, anger, happiness, and excitement also did not reach satisfactory reliability. During the coding process researchers noted that codes of excitement and happiness seemed to vary unsystematically between separate coders. When one researcher coded happiness for an emotional expression, the other would often code excitement. The overlapping codes of excitement and happiness were not expected but could be understood because excitement might be seen as a more intense form of happiness. Accordingly, these overlapping happiness and excitement codes impacted reliability more in the presence/absence scale that does not allow for differences in emotional intensity.

2 Exploratory Findings

Finally, exploratory post-hoc analyses within age group and video type categories revealed interesting emotional display patterns that inspire future research. The videos that overlapped both age groups contained more positive emotional expressions than those within the younger and older age groups. Also, there were more negative emotions in overlapping videos, as well as videos in the younger age range, when compared to the older age range. Overall, these findings suggest videos recommended for the older age group (9- to 12-years-old) contain less emotional content than those recommended for the younger age group (6- to 9-years-old) and those that overlap age groups. Additionally, specific emotions differed according to video age group, with positive surprise being more frequent in the overlapping category, negative surprise being more frequent in the young group, and anger being more

frequent in the young group. This could suggest emotional socialization differs within these years of middle childhood, and by nine-years-old, children might not desire or need as many external models to learn emotional display rules from. With the increasing emotional repression and peer influence during this time, it is possible that children in the latter half of middle childhood have different avenues of learning about emotions (Roberts, 2020; Saarni, 1979).

Post-hoc analyses were also conducted to see emotion differences between the video types. Analyses with the presence/absence codes found no interaction of video category with emotion valence. The Likert scale codes, however, did reveal patterns. Characters displayed more positive emotions in the Show category than the Reading category. Furthermore, there were more negative emotions expressed in the Explore category than Music. There were also interactions between the video types and the frequency of specific emotions expressed within them: using the Likert scale codes, the show category contained more excitement. Positive surprise was more frequent than expected in videos of the explore category. There were no other significant findings amongst the video types. These findings could suggest distinct emotions are more common in videos based on their purpose, with excitement used to draw attention to entertaining videos and surprise being an important aspect of exploration. These findings also inspire future investigations on the difference between the categories.

3 Implications

Because YouTube Kids provides a developmental context, the models and messages contained in videos on YouTube Kids can inform children's learning. YouTube Kids, and other online media, are used within various environments, like a child watching at home or a

teacher supplementing their curriculum with interesting videos in the classroom. The content of these videos could represent macrosystem influences, like social values and gender norms within that society, and the characters could be models for appropriate behaviors. In this project, I conceptualized the gender and emotion content of videos on YouTube Kids as macrosystem influences because the sampling method removed elements of individual engagement. Videos were selected from user profiles that had not been previously used, in an attempt to limit the influence of the suggestion algorithm. Returning viewers, however, have previously watched videos, and their watch history is used to inform which videos might be recommended in the future. When media is viewed by individuals, they experience and interact with the content within their virtual microsystem (Navarro & Tudge, 2022). The video itself no longer functions as a macrosystem influence but is now being directly interacted with by the individual, in a non-physical manner. The act of viewing a video could now be an avenue of developmental learning. Because of the personal interaction of choosing and watching a video, the stereotypes identified by this project could provide that individual with information about gender, emotions, and models for future behavior. Children viewing videos on YouTube Kids would be exposed to feminine characters modeling more positive emotionality, as well as characters lacking gender stereotypes displaying a lack of emotions. These stereotypical models have the potential to create lasting impacts on a child's understanding of gender and how it impacts what emotions can be expressed by who. Understanding these personal interactions with the media must also include consideration of additional influences from other ecological systems of development (Bronfenbrenner, 1977). Not only are videos viewed by individuals, but other microsystem influences like parental

rules and gatekeeping strategies for the media viewed by their children may impact how and to what extent children are exposed to media content. Additionally, aspects like video sharing on YouTube can serve as a mesosystem, connecting the microsystems of their home with those of friends, peers, or relatives. Independent organizations, like entertainment corporations and government agencies, also play a role in determining what content is created and available for viewing on YouTube Kids, which demonstrates possible exosystem influences. Ultimately, modern media has distinct roles in many developmental systems, and videos on platforms like YouTube Kids contain cultural messages that can be internalized through watching models.

The bidirectional influences occurring when people interact with their environments must also be considered. As children view videos on YouTube Kids, they also engage in reciprocal interactions of choosing, watching, and receiving recommendations. These reciprocal interactions influence the types of videos, and messages within them, that will be presented and watched in the future. This would provide a uniquely responsive and intensifying context for development: if a child selects videos that are created to be more feminine, they will continue to be exposed to more feminine models who display disproportionate amounts of positive emotion, like excitement. Future research that systematically varies videos selected for viewing will be needed to determine a causal relation between the videos watched and gendered patterns of emotional displays that a child would be exposed to. Furthermore, longitudinal research that systematically tracks videos viewed will be needed to determine associations between gendered media exposure and a child's conceptions of emotional display rules and gender stereotype beliefs. Attention-tracking

research, such as research using the Noldus tablet system, along with child interviewing could expand understanding of how children perceive gender stereotypes in media.

Extending considerations of microsystem influences, parental socialization of emotions is pertinent to the influence of YouTube Kids videos. This project used facial, behavioral, and labeled emotional expressions to represent emotional content. Parental emotion coaching practices have been demonstrated to be impactful in children's emotion learning (Gottman et al., 1996). As noted above, there was only one video that explicitly discussed frustration, thus emotion coaching behaviors, like encouragement, connection, and teaching were not represented within the scope of the videos sampled. Because of the diverse content in YouTube Kids videos, identifying videos with explicit discussions of emotions and emotion coaching would expand this research. Furthermore, character interactions within the videos could include interpersonal responses to emotions that mirror emotion coaching responses, like using negative emotions as an opportunity to connect. These methods of talking about emotions have been shown to positively impact emotional learning, so if they were to be modeled in videos, they could have a similar impact. These examples could inform vicarious learning from watching people respond supportively or unsupportively to emotions displayed by specific characters. Additionally, some media, like the Disney movie Inside Out (2015), explicitly depicts specific emotional content and parental responses to it. Finally, viewing media together may give parents and adults a space to engage with children in conversations about emotions. Parents and caregivers can help children understand concepts and make connections with their own experiences, by relating the content in the videos to events in the child's own life. When these events include emotions, not only can parents help

children label the emotions they have seen and experienced, but they can also use the characters and their actions as resources for teaching how to express emotions. While parental influences might not be directly included in YouTube Kids videos, based on emotion socialization theories there may be many ways that parents or caregivers may shape and use children's media exposure to influence how emotions are discussed in family life.

In addition to parental socialization practices, this project suggests that peer socialization is an important aspect of emotional and gender development. This specific environment of learning should be incorporated in future research, because the virtual microsystem of media can provide widespread commonalities within peer groups as well as mesosystem connections between environments. Content creators on YouTube, commonly referred to as "YouTubers", work to attract audiences of similar ages and interests to their videos. These videos that are shared and viewed by peers function similarly to popular television programs, by providing a common source of information for further social learning. The messages about emotions and gender conveyed through media could be intensified through peer group interactions. For example, if a classmate recommends subscribing to a particular "YouTuber" that consistently posts stereotypical portrayals of men and women, the child could see those stereotypes endorsed by their friend, as well as the YouTube characters, and have more motivation for adopting those ideas. YouTube Kids was modeled after its predecessor YouTube, which is characterized as a video-sharing social media platform: the

social aspect of sharing and viewing videos online often cooccurs with social learning about gender and emotions within groups of similar age peers.

Finally, the results of this project suggest important implications for how gender is represented and thereby understood. I was able to find meaningful results for non-gendered and androgynous characters by expanding gender beyond the traditional binary of masculine and feminine. Findings provide a more nuanced view of how emotions are disproportionally displayed by characters according to their gender presentation. Furthermore, the category of non-gendered characters in this sample was mainly comprised of disembodied and non-human characters, which could suggest that indicators of masculinity and femininity may be used by content creators in characterizing an individual's humanity. While specific implications of this finding require much future research using a gender studies approach, it is evident that conceptualizing gender as a continuum rather than as binary categories provides more nuance and is more appropriate for current depictions of gender. For example, in a project with transgender and cis gender adolescents, twenty-four percent of the transgender participants identified as non-binary, which means their gender identity does not fit within either masculine or feminine categories (deMayo, Kahn-Samuelson, & Olson, 2022). Conceptualizing gender as a continuum better reflects current social and virtual environments and using measures that represent a continuum of gender presentations will advance developmental science.

4 Strengths and Limitations

4.1 Sampling

All videos were sampled from the ghost-user's profiles at the same time. This form of sampling was unable to incorporate the intensifying effect of YouTube's suggestion algorithm, nor was it able to reflect the fluctuation of media offered on the platform. Bypassing the influence of the suggestion algorithm allowed content to be selected solely by recommended status, without extraneous factors. However, this method could have limited the extent of gender-stereotyped content presented. The suggestion algorithm might condense the type and frequency of gendered messages contained in the videos, so by sampling all the videos without the influence of the algorithm, videos with different gender- stereotypes could have been excluded. Additionally, the one-time sampling of the "top recommended" videos might not continue to reflect the offerings of YouTube Kids. The "top recommended" status is not static, and it will continue to change, as other videos are produced and watched. Still, the one-time sampling method was not only practical, but it also allowed for the most unbiased selection of videos.

Additionally, this project analyzed a small sample of videos from the rapidly expanding options on YouTube Kids. It is possible that the scope of the sampled videos limited the number of negative emotional displays, as well as the number of less frequently occurring emotions, like pride, love, anger, and shame/guilt. On YouTube Kids, there are many sub-genres of videos that children experience once they start watching more videos of similar content. Within these sub-genres it is possible less frequent emotions occur because of the different subject matter. For example, a group of videos that follows a family each day as

they go on a vacation might include more expressions of love than a video about friends playing a sport together. Alternatively, videos that highlight people as they play video games might include more expressions of pride and anger when they succeed or fail at a particular challenge. The low occurrence of these emotions could have hindered interrater reliability, and they could have weakened the strength of the chi square analyses. Future research including a larger sample of videos may allow for a more nuanced analysis of emotions, especially those occurring at a lower frequency.

4.2 Coding

This project utilized prototypical emotion categories to organize observations of emotional content and conduct analyses that explored gendered patterns of specific emotional displays. This allows the results to connect with general understandings of emotions and unifies the findings with other research on observational learning about emotions through modeling. Additionally, conceptions of prototypical emotions expand beyond labels to include synonyms, facial expressions, and nonverbal/behavioral indicators, which were useful in reliably identifying distinct emotions (Scherer, 2005). By using the framework of nine prototypical emotions, with surprise being split into positive and negative valences, this project was strengthened by connections to past research, current understandings, and future directions. Thus, despite the low frequency of some specific emotions, it was important that all these emotions were included.

Initially, coders were instructed to code each event of an emotion within the video, by indicating the time stamps at which it occurred. While coding this way, coders realized it was too difficult because when there were emotions displayed, there were an extremely high

frequency of them. This intensity of emotional expressions caused more interrater confusion, so I shifted the coding to the 0-2 Likert scale, indicating the presence and amount of each emotion for each character. However, coding using the 0-2 Likert scale of emotional content did not reach acceptable reliability for some emotions, and most emotions showed high skewness, prompting me to try categorizing presence/absence of each emotion. Although time-specific event coding may be useful in future research, the frequency with which emotions occur will remain a challenge for interrater reliability. Overall, relying on separate teams of independent coders who generally saw the same emotions for the same characters with acceptable reliability is a major strength of the current study.

5 Recommendations

5.1 Conceptions of Gender

Although I drew from similar previous work when creating my coding schemes, I made some specific adjustments to better encapsulate the wide variety of characters now included in modern media. Firstly, the categories of gender presentation included non-gender stereotyped and androgynous characters, which is a vital shift towards the arising conceptions of gender as a spectrum of expression. Additionally, because of the unique video content, there were some specific activities and roles that were considered for gender stereotypes. Coders determined that character roles of superheroes or adventurers would be considered an indicator of masculinity based on the agentic nature of these activities. As another example, the action of singing in itself was considered as not inherently masculine or feminine. Instead, the content and pitch of voice were used to determine if the activity was stereotyped as masculine or feminine. Further study on the gender stereotypes held by children in the age

group of interest will be useful to determine whether and how roles and activities are gendered.

5.2 Conceptions of Emotion

Creation of the emotion coding scheme utilized both personal knowledge and empirical understandings of what constitutes emotional expressions. Although the coding process draws on identified socialization strategies, facial changes, and behavioral indicators connected with emotions, coders experienced distinctive challenges based on the virtual format of the content (Ekman et al., 1971; Gottman et al., 1997). Media has the added component of presenting information that has been edited and these videos could include auditory, visual, linguistic, and symbolic representations of emotions. Accordingly, the requirements for emotional expressions expanded to include understandable symbols and shorthand versions of emotional expressions (I.e., the characters "<3" to display a heart or the phrase "ily" to represent "I love you" would be considered an expression of love for that character). The characters included in this analysis were both live-action and animated, which added further variation in how emotions were expressed. Depending on the style of character, coders tended to perceive emotional expressions at different levels of intensity. For example, when a character smiled, coders might have indicated happiness for an animated character, but excitement for a live-action character.

5.3 Future Research

There are many future directions for exploration of media's role in gender and emotional development. First, this content analysis should be replicated with a larger sample size, to address low frequency emotions and expand analyses of the age-group and video type

categories. Second, as gender is just one social group in which individuals are characterized, this style of content analysis could be adapted to investigate the impact of other social identities on how emotions are expressed. For example, characters could represent different racial and ethnic identities and how they express emotions could perpetuate stereotypes of those social groups. Third, research is needed to understand how the gender stereotypes in YouTube Kids content are perceived by children within middle childhood. This project demonstrates that stereotypes are present in the videos, but children do not simply accept and incorporate new information into their thought processes (Liben, 2017). Instead, children use their previous experiences and gender schemata to interpret the messages present in their environments (Liben, 2017). This avenue of research could reveal what extent of a child's current gender understanding influences and is influenced by the messages contained in modern media. One way to do so is by using tablet-based attention trackers to observe how children attend to these models. This procedure could reveal how an individual's gender identity impacts how much cognition is directed towards same-gendered models. Demonstrating selective attention to same-gendered models in YouTube Kids videos would reinforce the claim that virtual models, who share characteristics with individuals, are influential in understanding display rules for emotions, as well as align with previous research (Halberstadt et al., 2001; Martin, 2017). Additionally, collaboration with media organizations like YouTube and researchers in other geographic locations will provide insight into how video suggestions might differ according to country and cultural gender expectations. I was able to experience a preview of this interaction when I studied abroad in Costa Rica, while conducting this research. When I logged on to my coding account on YouTube Kids to view

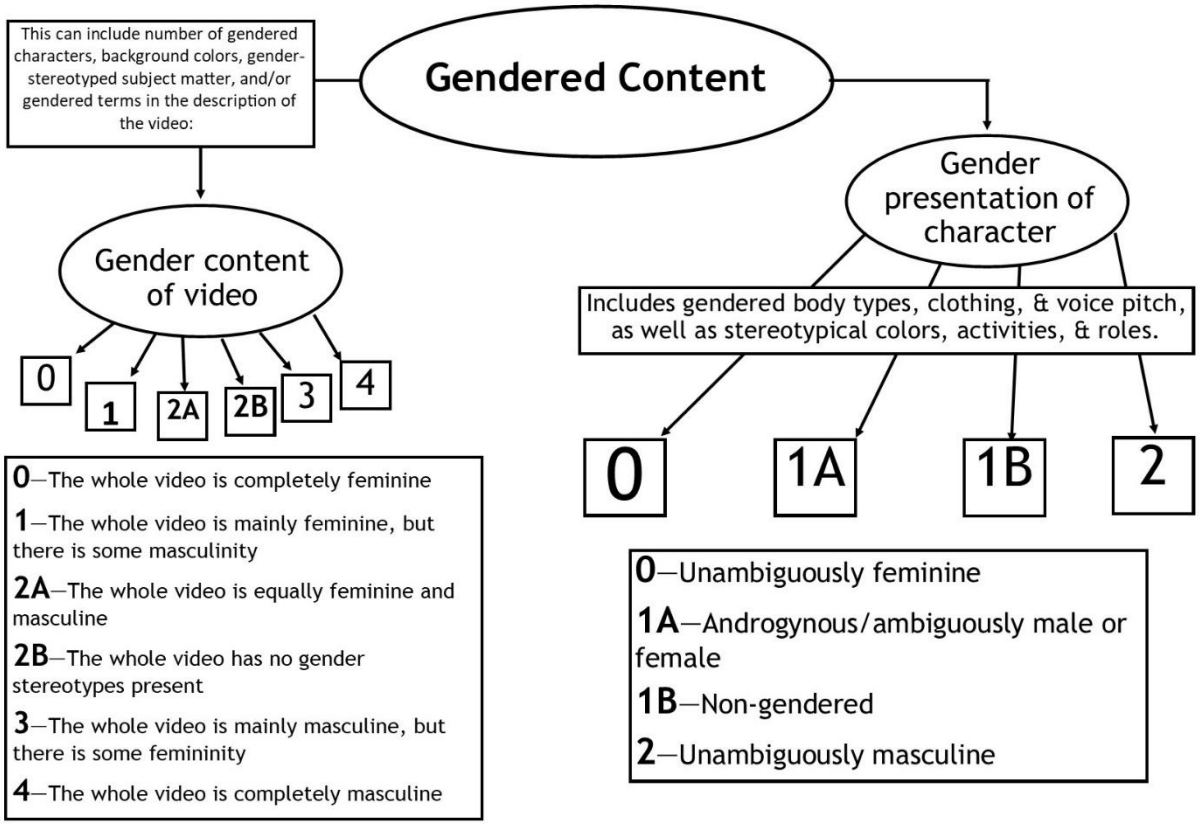
videos, all the top recommended videos were completely different, in language, content, and artistic style. I had not viewed any videos except those that were sampled in the United States, so it is plausible that simply the physical location indicated by my IP address informed which videos would be recommended to my profile. This anecdote illustrates how different physical and cultural macrosystems can influence an individual's experiences within the microsystem (Bronfenbrenner, 1997). Finally, future studies can explore how the virtual world influences development at all levels, including peer-relationships within internet communities, sharing videos between friends, and videos that are included in school curricula. In essence, YouTube (and its sub-site YouTube Kids) is a social media platform, intended to foster relationships and community by sharing videos (Youtube, n.d.). For example, a group of friends who discuss and share recommendations of their favorite videos and content creators might experience more videos of a sub-genre, which might include different cultural expectations. On the other hand, videos incorporated in educational settings are intentionally chosen for viewing by school administration and teachers and these selective videos likely have more educational purposes, which could impact stereotyped content. In addition to how emotions are expressed, how people of different genders are portrayed in a learning environment can model stereotyped expectations of academic interests and achievement (Bandura & Bussey, 1999). Future research could utilize the same ecological framework to inform how virtual environments might impact development (Bronfenbrenner, 1997).

CONCLUSION

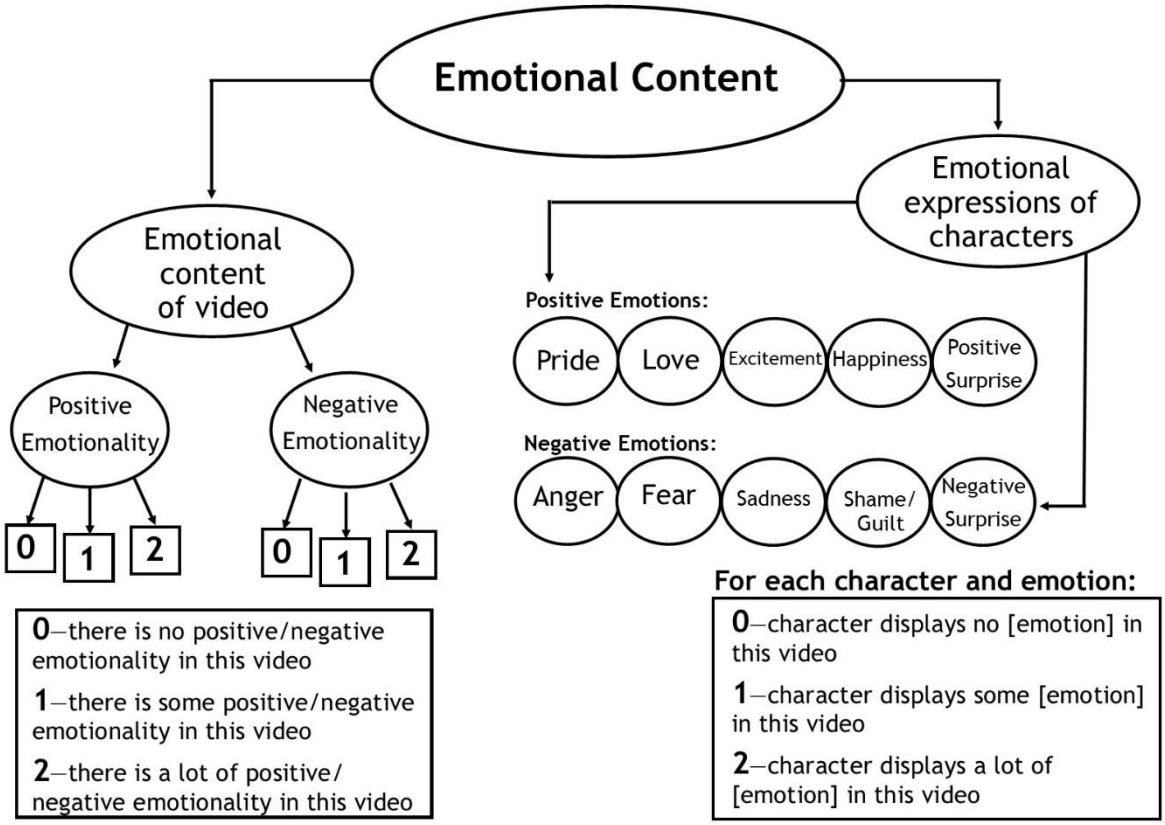
In this study I have tried to expand knowledge of how modern media informs gender and emotional development. I focused on media, as an influential aspect of the environment, because it is vital to examine the settings, objects, and activities that exist in the everyday lives of children today. While there is yet to be empirical evidence of direct relations between YouTube Kids content and emotional and developmental outcomes of children, the layered contexts of development have an undeniable role in forming understandings of gender and emotions. I endeavored to analyze the characteristics of what children are currently watching and engaging with through a sample of YouTube Kids videos to better understand what messages are present in modern media to be internalized through socialization processes. As YouTube Kids, and other similar video sharing platforms, rise in popularity, they are becoming major informers of what is culturally expected. Despite previous progress towards egalitarian depictions of gender, emotionality is still a gendered aspect of media representations. Evolving forms of media could be an avenue to de-gender emotions by proactively presenting and promoting equal representations of people and their sentiments. Modern media has the potential to be an avenue to reduce gender limits on emotions by promoting equal representations of people and their sentiments.

APPENDICES

1 Appendix A: Gender Content Coding Overview



2 Appendix B: Emotion Content Coding Overview



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