

A CONTENT ANALYSIS OF MORAL VALUES, EMOTIONS AND THEIR LINKS  
IN WESTERN CHILDREN'S TV SHOWS

BY

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A Thesis Submitted to the Graduate Faculty of

WAKE FOREST UNIVERSITY GRADUATE SCHOOL OF ARTS AND SCIENCES

in Partial Fulfillment of the Requirements

for the Degree of

MASTER OF ARTS

Communication

December 2021

Winston-Salem, North Carolina

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## ACKNOWLEDGMENTS

I would like to express my gratitude to my thesis advisor, Marina Krcmar, for her overall intellectual contribution and sincere guidance in completing this thesis. She has been an immense source of knowledge and the greatest asset to my training. I would not have the methodological skills or understanding of media psychology that I possess without her support. I would like to give my thanks to my committee member, Rebecca Gill, for her continuous support and encouragement during my graduate studies at Wake Forest University. She has increased my exposure to various topic areas and been an asset to my professional development. To my committee member, Elise Dykhuis, thank you for participating in my defense and providing valuable feedback regarding how to improve this thesis project.

Beyond my committee, I could not have completed everything that I have accomplished without support from my family and friends, who are a constant source of humor and grounding in every area of my life. I would not be the professional that I am today without the support from these people.

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**LIST OF ABBREVIATIONS**

MTF	<b>Moral Foundations Theory</b>
CAD	<b>Emotion Triad of Contempt, Anger and Disgust</b>

## ABSTRACT

Given the role of prosocial media in childhood socialization, the present study employed the moral foundations theory (MFT) as a framework to examine moral messages with a focus on character's emotions portrayed on Western children's prosocial TV programs. As a pervasive theme in prosocial media, the study added inclusion/exclusion as a separate moral category. Overall, 141 moral domains were coded in 60 episodes in three popular preschool cartoons. The results showed the care/harm, fairness/reciprocity, and authority/respect foundations were dominant in preschool television programs. Moreover, positive emotions were portrayed more frequently than negative emotions. By examining the relationship between emotions and moral foundations, I found that anger was strongly associated with care/harm, fairness/reciprocity, authority/respect foundations. Love was strongly associated with the care/harm foundation. Fear and contentment were strongly related to the authority/respect foundation. Interestingly, the in-group/loyalty foundation and inclusion/exclusion were not associated with any discrete emotion. The findings have indicated that in Western prosocial media, links between moral domains and emotions were not exclusive, but emotional expressions still differed in reaction to different kinds of moral domains. The limitations and future research directions are discussed in the end.

Keywords: *Morality, Moral Foundations Theory, Emotion, Prosocial Media, Children*

## CHAPTER 1: INTRODUCTION

Cheating on an exam or lying are behaviors that most people would judge as morally wrong. In order to address how we derive moral judgments, psychologists have explored the existence of moral domains (particularly those seen as ubiquitous), proposing the moral foundations theory (MFT) as one of the explanations. To be specific, the MFT argues that morality might be partially “innate” and, as such, identifies a set of instinctive moral domains (i.e., care/harm, fairness/reciprocity, ingroup/loyalty, authority/respect, and purity/sanctity) (Haidt & Graham, 2007; Haidt & Joseph, 2004) that are activated when making moral judgments and decisions. According to the theory, our reasoning to judge behaviors as moral or immoral depends on whether one of those five moral foundations is violated.

Haidt (2003) claims that emotions might be crucial for informing moral judgment. He argues that the morality-emotion link is not limited to a general relationship. Instead, specific emotions may be associated with specific types of moral values. The idea can be traced back to the CAD-triad hypothesis, which predicts that anger, contempt, and disgust are typically elicited by the violations of three moral domains----autonomy, community, and divinity (Rozin, Lowery, Imada and & Haidt, 1999). Haidt and Graham (2007) refined this moral trinity. They stated that care/harm and fairness/reciprocity as the foundation of the autonomy ethic, authority/respect and loyalty/respect as the foundation of the community ethic, and purity/sanctity as the foundation of the divinity ethic. That is to say, the relationship between moral domains and emotions in the CAD-triad hypothesis should be replicated in MFT.

Moreover, Haidt and Joseph (2008) have also proposed typical “characteristic emotions” that are derived from each moral foundation to reflect its primary values. For example, the purity/sanctity foundation values the concepts of temperance and sacredness. Further, disgust was evolved as a “social emotion” to reflect the moral principles of purity/sanctity. Based on Haidt &



Joseph (2008), the “characteristic emotions” are crucial for the judgment of corresponding moral principles. Therefore, the following links are formed: 1) care/harm--compassion; 2) fairness/reciprocity--anger, gratitude; 3) authority/respect--fear, respect; 4) in-group/loyalty---pride rage; 5) purity/sanctity---disgust (Haidt, 2003; Haidt & Joseph, 2004, 2008).

Current studies on emotions and moral judgments have indicated that emotions may be crucial to predicting moral judgment and informing moral decision-making (Haidt, 2001; Teper et al., 2015). Scholars have stated that emotion integrated with motivations and various cognitive operations (e.g., memory, attention, perception) can shape individuals’ moral judgment and moral behaviors (Fredrickson & Branigan, 2005; Inzlicht & Al-Khindi, 2012). In order to elucidate how emotion shapes moral judgment and moral behavior, scholars have distinguished several moral emotions from other emotions (Haidt, 2003; Tangent, Stuewig & Mashek, 2007; Teper, 2015). Specifically, “moral emotions” (shame, guilt, empathy, gratitude., etc.) are those “linked to the interests or welfare of either of society as a whole or at least of persons other than judge or agent” (Haidt, 2003, p. 276). Moral emotions provide the motivational force to act in the interest of moral goodness and restrict from doing wrong (Kroll & Egan, 2004). Tangent, Stuewig & Mashek (2007) argue that moral emotions represent an essential but often neglected component of the human moral apparatus, stating the necessity to address moral emotions in future studies of morality.

Numerous studies have explored the connection between both emotions and moral domains. Whereas some theories posit specific correspondences between moral domains and emotions (e.g., disgust-purity and harm-anger, CAD-triad hypothesis, MFT ), the studies to test this claim have shown that these links are not exclusive (Cameron et al., 2015; Russell et al., 2013, Landmann and Hess, 2018). For example, Landmann and Hess (2018) conducted a study to

test if specific emotions are linked to specific moral domains in the MFT. However, based on their results, Landmann & Hess (2018) have suggested that moral violations can lead to mixed emotions and the links between moral foundations and emotions seem more complicated than the MFT proposes. Moreover, by critically reviewing the evidence for specific morality and emotion links, Cameron, Lindquist and Gray (2015)'s study has also revealed no support for exclusive relationships between moral domains and discrete emotions.

A large body of research has examined media utilizing the MFT (e.g., Cingel & Krcmar, 2019; Krcmar and Cingel, 2016). In particular, some studies focus on exploring the relationship between children's morality and media exposure. For example, Cingel and Krcmar (2017) conducted research to study the effects of media exposure on children's existing moral intuitions of care and fairness, suggesting that television exposure can bring positive effects on children's morality via perspective-taking. Thus, while more is known about the effects of such exposure, significantly less is known about the actual exposure itself--that is, what moral content are young children exposed to?

Assessing media content children are exposed to is important, namely because children are at the developmental stage in which their attitudes, motivations, behaviors, and perception of the world are pliable and easily influenced by external forces. So, the ubiquity of media content as an external influence makes it an attractive field to study (Hahn et al., 2016; Tamborini et al., 2020). Moreover, given the role of prosocially-oriented media could have in childhood socialization, it's also important to know what is being shown in the media regarding moral values and emotions (Wege et al., 2014). Thus, the present study intended to analyze the moral message in prosocial TV programs, mainly investigating the link between emotions and MFT categories.

While there is disagreement about both the universality and effects of moral domains on moral judgments, there has been no systematic attempt to analyze the link between emotions and moral domains presented in media content. Therefore, in order to understand the moral content presented on television as a means of extending the research on the effects of that content, we conducted a content analysis that employed the MFT as a framework to examine moral judgment /decision-making with a focus on character's emotions portrayed on children's prosocial TV programs.

## CHAPTER 2: LITERATURE REVIEW

### *Moral Foundations Theory*

The rationalist approach of morality has been adopted by moral developmental theorists such as Kohlberg (1984). The rationalist models emphasize the importance of moral reasoning, suggesting that moral principles are knowable by reason alone. To be specific, the rationalist approach claims that moral judgments and behaviors primarily emerge from a “cognitively motivated process where acts are judged as wrong and right” based on an explicit set of rules (Cingel & Krmar, 2020, p.10). What’s more, this approach focuses on cognitive development throughout childhood and states that the development of moral understanding and more complex rules are linked to exposure to one’s social environment.

Opposing rationalist models of moral judgments, some scholars argue that morality might be partially innate and often arises from automatic moral intuition. They provide intuitionist approaches as an alternative way to study moral judgments (Haidt, 2001; Haidt and Joseph 2004, 2008). By contrast, Haidt (2001) notes that there are two cognitive processes underlying moral judgment---reasoning and intuition—suggesting that the process of reasoning is often overemphasized as the motivation trigger/direct cause of moral judgment. Moreover, the post hoc justifications constructed by the reasoning process bring about the effect of illusory objective reasoning. When faced with a moral situation, moral intuitions come prior to moral reasoning. The theory assumes that when we think we have rationalized a moral judgment or decision, it’s actually the case that we might actually make up those rationalizations post-hoc to account for actual intuitive reactions (Cingle & Krmar, 2020; Fine, 2006). Baron (1998) indicates that when people follow personal intuitions about what is right and wrong, they sometimes can cause in-conductive or even destructive consequences to a variety of public settings (e.g., public health, public policy, tort system). Hence, it is essential to have an accurate understanding of an intuitive

basis of moral judgment, which may be helpful to avoid mistakes in decision-making and bolster the quality of moral judgments.

According to the notion of moral innateness, Haidt and Joseph (2004, 2008) coined a moral foundations theory (MFT), which proposes that an individual's intuitive moral judgments are based on five (or six) evolutionarily developed moral systems. These systems are (a) care/harm (relating to caring, protecting, empathy, nurturing, and concerns/ responses to another in need, as well as an aversion toward ignorance/harm/cruelty, to cause pain); (b) fairness/reciprocity (linking to reciprocal altruism and concerns for honesty/equality/justice, as well as an aversion toward cheating/injustice/inequality of distribution); (c) group/loyalty (linking to commitment, loyalty, and self-sacrifice to family or other in-group members, as well as an aversion toward quitting/treason/betrayal); (d) authority/respect (based on individuals' respect/deference to legitimate authority and social order, as well as an aversion toward disobedience/disrespect); and (e) purity/sanctity (linking to individuals' desiring of sacredness and their avoidance of biological/social containment, as well as an aversion of uncouthness/lust/intemperance).

Past research often employs MFT as the framework to examine moral messages as well as their effects (e.g., Cingel & Krcmar, 2019; Krcmar & Cingel, 2016; Tamborini et al., 2020; Hahn et al., 2019; Tamborini et al., 2017; Hahn et al., 2016). As such, MFT is a good framework for studying human morality in messages, particularly in children's media because "depictions of various behaviors in children's media, whether or not they have been studied under the framework of moral processing, can be grouped into these foundations or categories" (Cingel & Krcmar, 2019, p. 11). Hence, in this study, we adopted MFT as a framework to explore the moral content in preschool children's TV programs and its relationship with emotion.

### *Inclusion/Exclusion as a Separate Moral Category*

Inclusion and exclusion are pervasive in children's lives and continue throughout adulthood. The study of inclusion and exclusion can help us to understand its fundamental role in children's social and moral development (Killen & Rutland, 2011). Through experiencing inclusion and exclusion, children develop morality (i.e., tolerance of social differences and inclusion of outgroup members) and form social identity regarding gender, race, age, culture, etc. As a result of these developments, children become capable of rejecting or strengthening stereotypic expectations and prejudicial beliefs. Children who form social identity without invoking moral judgments appear to be intolerant of social differences and exhibit more biased, prejudicial attitudes towards others. Yet children with a well-developed understanding of group dynamics often can balance these concerns with fairness and equality and justify inclusion to embrace the social differences. (Killen & Rutland, 2011; Hahn et al, 2016).

However, inclusion/exclusion as a moral concept contradicts the idea of ingroup-loyalty in moral foundations theory. Specifically, the comprehension of children's inclusive/exclusive behaviors cannot circumvent the analysis of group and social relationships (Killen & Rutland, 2011). Children learn to identify with social categories in early developmental stages, and this identification has the potential to result in ingroup favoritism as well as exclusive or intolerant attitudes towards those from other groups. In other words, social exclusion within groups is related to the children's sense of group identity, their desire to maintain differences between in and out-groups, and their motivation to define group norms about legitimate peer group behaviors. Therefore, ingroup identification and loyalty endorse children to maintain propensities favoring those ingroup members and engaging in group-based exclusion behaviors (Killen & Rutland, 2011).

Since inclusion/exclusion and ingroup/loyalty seem to be two opposite concepts, there is a debate regarding whether inclusion/exclusion and ingroup/loyalty should be perceived as separate categories or two ends of one dimension. But the present study treats inclusion/exclusion as a separate category for two reasons: first, a group of scholars imply that children do not only refer to ingroup identification/favoritism to decide whom to include in their group, but they also children reason about their decision by weighing multiple concerns such as group norms, group membership, fairness, etc. (Tripp & Webbert, 2007). Second, there is an alternative claim which supports that ingroup identification is independent of negative attitudes (intolerant/exclusive attitude, hostility, discrimination) toward outgroups. It states that a negative attitude toward outgroups is not required for ingroup-attachment. In this case, in-group bias, discrimination, and prejudicial beliefs originate from preferential treatment toward ingroups rather than hostility toward outgroups. Conversely, exclusion can be motivated solely by outgroup antagonism and hostility in the absence of ingroup-loyalty (Killen & Rutland, 2011; Tripp & Webbert, 2007). Therefore, besides five moral domains in MFT, our study added inclusion/exclusion as a separate moral category.

#### *Research on Moral Messages and Media*

Prior research on moral messages in the media has looked at both moral message content itself and at the effects of these moral messages on people. However, the efforts spent on analyzing moral content in TV, especially in prosocial TV programs, are still significantly more scarce. It is important to analyze moral content on prosocial television in particular for the following reasons. First, although social media is starting to replace traditional media in people's daily lives, preschoolers still watch TV shows more than anything else. Recently, TV is playing a central role in children's daily lives, and infants and toddlers generally watch more TV than ever before. On average, children ages 2-5 are exposed to TV or video every day, usually for about one

or two hours. Around two-thirds of mothers with three-year-olds report that their child watched two hours or more per day (Schmitt, 2001). Research has shown that children's behaviors are influenced through exposure to TV shows. For instance, children who are frequently exposed to violent or sexual TV shows will exhibit more negative social behaviors such as aggression (Goldberg, 1981). Hence, to better understand the effects of children's television exposure, it is crucial to learn what TV content children are frequently exposed to.

Second, culturally-dominant values, including moral values, often are transmitted through TV (Glover, Garmon and Hull, 2011). Heintz-Knowles (2001) has argued that television can serve as a "cultural storyteller", which reflects "both the values and ideals of American society" and "shapes the attitudes and beliefs of those who watch it" ( p. 177). What's more, Sullivan (1987) also maintains that "television often transmits dominant or desirable values of the culture, and 'it is within this dominant story...that we individually and collectively attempt to make our way as responsible and significant moral actors'" (p. 312). So, the content analysis of moral messages in child media is worthwhile because it allows us to explore the apparent moral values in children's TV programming, which implies desirable moral principles that people expect children to learn in United States society. Since televisions as a medium can provide important social implications and have a significant influence on the lives of children, more research is needed to explore how moral messages are portrayed in children's TV programs.

*The Effects of Moral Messages on Children During Media Exposure.* Most research on moral messages focuses on their effects. Since prosocial television often includes moral lessons in their narratives, some scholars study moral narratives in children's TV shows in particular, as well as their influence on children (Mares & Acosta, 2008; Cingel & Krcmar, 2019). For example, Mares and Acosta (2008) used Clifford's episode to test if children could comprehend intended moral lessons in prosocial media. In their study, kindergarten children were randomly assigned to



two conditions. They were asked to watch a 10-minute episode from Clifford, which intended to promote inclusion to people with disabilities. In the original episode, Cleo initially feared the disabled character, KC, but accepted him later. In the edited version, the fear was removed. They found that most children in both conditions failed to identify the moral lesson in the cartoon. The study also tested the interaction between emotional comprehension and moral comprehension. With the original episode, children who identified that Cleo initially feared to play with KC were less likely to comprehend the moral lesson. When the fear was removed, children who identified that Cleo was initially happy to play with KC were more likely to comprehend the intended lesson. Therefore, the results showed that emotions played a role in children's understanding of moral lessons. But the accuracy of emotion comprehension was less crucial than hedonic valence in this case.

How do moral messages on children's TV programs influence children's moral judgment/reasoning? Recently, Cingel and Krcmar (2019) conducted a study to test one of the social institutionalist model's arguments, examining if television exposure enables children's existing moral intuitions about caring and fairness to be more salient. They also studied the role of perspective-taking to mediate the relationship between media exposure and children's moral judgment/reasoning of caring and fairness without comprehension of content. In the study, children were randomly assigned to one of four experimental conditions. They watched an episode of *Arthur* which either did or did not feature a moral lesson. The results found that moral lessons on prosocial television had positive effects on children's moral judgment but not on moral reasoning. Additionally, perspective-taking mediated the relationship between media exposure and moral judgment & reasoning. This means that comprehension may not be a vital factor for the positive effects of prosocial TV programs, and children's perspective-taking can promote children's moral judgment/reasoning during media exposure without comprehending the content.

These studies, however, only tested the effects of moral messages on children when exposed to the media but did not analyze moral messages themselves in child media. What moral content are young children often exposed to?

*Moral Message Presented on Children's TV Shows.* The notion of television as a contributor to moral values is a cultural truism, extensively, perhaps in part due to the fact that a large body of research in various academic fields looks at TV's moral value and its impacts on individuals and human society. This research ranges from popular TV series with different genre types (Hardy, & Claborn, 2007; Bilandzic et al., 2017) as well as entertainment products (Raney, 2011; Bilandzic, 2011) and the political dimension of news and current affair reports (Boltanski, 1999).

Although content analyses of TV's moral content are scarce, the few studies available demonstrate the pervasiveness of moral messages presented through people/characters' communication and conduct in TV. They also provide the crucial implication that all TV genres (e.g., drama & sitcom, reality TV, news) are imbued with moral messages and offer moral insights (Boltanski, 1999; Douglas, 2001; Hastall et al., 2012; Bilandzic et al., 2017). Douglas, (2001), for instance, found family members in prime-time television often employ a positive manner to communicate with each other, showing that moral messages surrounding the family strengthen family values. What's more, Bilandzic et al (2011) studied the moral pattern in different genres of TV series, particularly looking at social norm violations. The study revealed that different genres of popular TV series exhibited differences in the types and frequency of moral messages as well as their portrayal. But it also implied that popular TV shows with different genres always play an important role in the conscious and unconscious moral education of audiences, even though the extent of positive and negative effects on viewers' moral values will remain to be debated.

Previous content analyses of moral content in media have primarily focused on adults, but studying media content that children are exposed to is of greater importance, given that these audiences are at the developmental stage in which their “foundational psyche and belief structures” are in the process of being built (Belsky & Pluess, 2009). Hence, they are vulnerable and easily influenced by external forces, including media influence. Specifically, the expression of intuitive motivations by exemplars in media content can activate those altruistic motivations in children’s minds. In this way, repeated exposure to media content highlighting particular moral intuitions can increase chronic accessibility, which in turn shape children’s cognitive development as well as their long-term, real-world behaviors. Therefore, examining prosocial media content to know the moral intuitions in MFT that are displayed frequently may help us identify media’s potential influence on children’s moral & cognitive development and future behavior (Hahn et al., 2016).

Considering the potential implications regarding the effect of children’s prosocial media on moral reasoning, several recent studies have specifically taken a look at how child media present and portray moral messages (Tamborini et al., 2020; Hahn et al., 2019; Tamborini et al., 2017; Hahn et al., 2016). Tamborini et al. (2020), for example, applied the method of content analysis to look at the representation of altruistic and egoistic values through the frameworks of MFT and the model of intuitive morality and exemplars (MIME). They found that egoistic motivations, especially competence, autonomy, and relatedness, appeared more frequently than altruistic motivations. What’s more, egoistic motivations were frequently rewarded when they were upheld compared to altruistic motivations, but this pattern was only displayed in children's TV shows for middle and older age groups. The findings imply that the overrepresentation of egoistic content in older children's TV programming may be the function of content producers selecting motivations that are important and salient for children at different developmental stages.

The present research employs MFT as the framework for studying moral messages as well as their effects. However, before investigating the relationship between moral domains in MFT and emotions, I want to know which moral foundations are most apparent in western children's prosocial media. Therefore, I ask:

*RQ1*: Which moral principle in moral foundations theory appears most frequently in children's TV shows?

Although MFT argues for five (six) foundations, previous research often examines the role of emotions in morality in experimental studies and mainly analyzes the moral domains of care/harm and fairness (Teper et al., 2015; Landmann & Hess, 2018) due to two reasons. First, since moral "rules" vary based on a number of factors such as political belief, culture, religion, etc., scholars have generally found that domains of harm/care and fairness are less variable and more emotion-specific compared to other moral principles (Haidt & Graham, 2007). Second, the principles of harm/care and fairness appear to "apply most closely to behavioral measures used in moral psychology" and are more aligned with the moral situations that people usually face and experience in their daily life (e.g., provide help/assistance, be honest, lying/cheating) (Haidt & Graham, 2007; Teper et al., 2015).

Furthermore, the foundations of care/harm and fairness are valued more in Western culture (Krcmar & Cingel, 2016). These two principles are more aligned with the moral situations that people are most likely to face in their daily life (Teper et al., 2015; Cingel & Krcmar, 2019). In contrast, the foundation of purity/sanctity is valued less in the West (Cingel & Krcmar, 2019). However, the principles of ingroup loyalty, authority, and purity/sanctity are valued more in non-Western cultures. Research on people from other cultures outside the US has shown the moral considerations beyond individual-based concerns of care/harm and fairness such as "spiritual purity/sanctity", "hierarchical role fulfillment", and "loyalty to the local or national

group” (Graham et al., 2011, p, 10 ). In the study, we focus on analyzing Western children’s TV shows. Thus, I predict that:

*Hypothesis 1 (H1):* The foundations of care/harm and fairness appear more than other foundations in children's TV shows.

### *Research on Emotions and Media*

*Categorizing Emotions.* Scholars who have studied emotion cannot reach an agreement on the definition of their topic. Instead of achieving a consensus to the word "emotion," they attribute different meanings to it and elude an agreement on many aspects of emotion. Nevertheless, most psychologists acknowledge that emotions must entail three components: 1. A physiological reaction to a stimulus. 2. A behavioral response. 3. A feeling (i.e., as a state of consciousness, such as that resulting from emotions, sentiments, or desires ) (Gazzaniga, Ivry & Mangun, 2002).

Researchers have attempted to identify basic emotions in humans in many ways, including studying facial expressions. Darwin (1872) stated in *The Expression of Emotions in Man and Animals* that basic emotions reflect inborn instinct, and human expression of basic emotions is similar to those of lower animals. Based on Darwin’s argument, other scholars believe that facial expressions would open a window for the study of emotions. The assumption is based on the fact that facial expressions are observable. Furthermore, facial expressions are automatic manifestations that correspond to people’s inner feelings (Darwin, 1872). The investigations of human emotion through facial expressions have generated a list of human basic emotions (Ekman & Friesen, 1969, 1971; Tracy & Matsumoto, 2008).

The research on facial expressions carried out by Ekman and Friesen (1971) is the most influential one. At first, they rejected Darwin’s idea that emotional expression was a common

human feature and addressed the role of culture in the human expression of emotions. They claimed that the specific ways we show emotion are learned behaviors that varied across cultures and the meanings of facial expression are different among cultures. However, when Ekman and his colleagues studied emotions all around the world, they observed that human facial expressions to convey emotions do not vary much by culture. People from different cultures (e.g., Beijing, Bronx, Papua New Guinea) displayed similar facial expressions to show different types of emotions, including happiness, sadness, disgust, fear, etc. They concluded that some of our most important emotional expressions are in fact universal. The expression appropriate to a given situation can, however, vary greatly across cultures. From this work, Ekman and Friesen (1971) identified six basic human facial expressions, and each expression represents a basic emotional state: *anger, fear, sadness, disgust, happiness, and surprises*.

The list proposed by Ekman and Friesen (1971) is widely accepted. But researchers have kept adding other emotions to the list as potential candidate basic emotions in later work (e.g., *contempt, shame, guilt, embarrassment, awe, excitement, pride in achievement, etc.*). Although there is a debate regarding whether any single list is adequate to include the full range of human emotional experiences, most scientists agree that three characteristics are common to all basic emotions: 1. innate, 2. universal, and 3. short-lasting. In their research, Tracy and Matsumoto (2008) studied the nonverbal expressions of *pride* and *shame* in reaction to winning and losing at the 2004 Olympic and Paralympic Games. They discovered that behavioral reactions to shame and pride are innate because most contestants displayed pride upon winning and shame upon losing. But they have also claimed that the experience of shame and pride could be shaped by cultural rules and conventions as well. Most importantly, by showing their “innateness,” they have provided evidence that might elevate pride and shame to the list of basic emotions.

Researchers acknowledge that emotional reaction to a stimulus can be characterized by two factors: *valence* (positive-negative) and *arousal* (the internal emotional response, high-low) (Gazzaniga, Ivry and Mangun, 2002). For instance, if someone got a good score on the exam, they would feel happy. If they failed the exam, they would feel sad. Most people would associate being happy with a pleasant feeling (i.e., *positive valence*) and being sad with an unpleasant feeling (i.e., *negative valence*). Furthermore, besides the valence, the intensity of feeling may be different. Although we experience something happy in both situations, the intensity of that feeling (i.e., *arousal*) is certainly different. By tracking *arousal* and *valence* of emotions, research can more concretely assess the emotional reaction elicited by stimuli (Gazzaniga, Ivry and Mangun, 2002). In this study, we used the list of basic emotions proposed by Ekman and Friesen (1971) to study emotions, but we added other emotions into the list (e.g., shame, guilt, pride, etc.). What's more, emotions were categorized into negative emotions and positive emotions based on their valence.

*Emotions Displayed in Media.* As children grow up, they need to internalize the norms and ideologies of society to acquire the social skills for interacting with others and adapting to a larger cultural environment. The term "socialization" can be defined as the process of making social (Mccord & Raval, 2016). More recently, developmental psychologists have come to study the socialization of emotions, which means the process of shaping children's emotional experience and expression as well as the understanding of emotions from infancy through adolescence (Halberstadt et al., 1995). Socialization of emotion is associated with children's competence, including social and emotional competence and emotional- regulation. In early childhood, the supportive-socialization environment will help children obtain skills to regulate negative emotional reactions and achieve better adjustment outcomes (Halberstadt et al., 1995; Zahn-Waxler, 2010).

The study of emotional norms in media is important to understanding cultural differences in emotional socialization (Mccord & Raval, 2016; Wege et al., 2014). Emotional norms are defined as parents' beliefs and expectations on children's understanding and expression of emotions (Wege et al., 2014). Social scientists claim that emotional display rules, which are learned in early life through socialization, can influence people's emotional expressions & experiences depending on the "emotional priorities" of their culture. The culturally-appropriate emotional norms reflected in media teach people which emotions should be "felt, displayed, or attenuated" in different situations (Legare & Harris, 2016, p. 365). They also dictate when and how people should express their emotions (Safdar et al., 2009; Matsumoto, Kasri, & Kooken, 1999). Therefore, even though the study of emotional norms is still scarce, it is critical to explaining the cultural differences in emotional socialization (Wege et al., 2014).

Media provides an essential resource for studying emotional norms. Recent studies have shown that cultural-specific emotional norms are reflected in child media, implying that emotional norms are culturally transmitted and learned by children through exposure to media (Tsai et al., 2007; Wege et al., 2014). For example, Wege et al. (2014) conducted a content analysis to investigate emotions displayed in children's storybooks for preschoolers between American and two Eastern European countries (i.e., Romania and Turkey). They focused on examining the display of negative emotions in storybooks. The results showed that both American and European storybooks showed more positive emotions than negative emotions. However, American storybook characters displayed more negative powerful emotions (e.g., anger and disgust) and less negative powerless emotions (e.g., fear, shame) compared to the characters in Turkish and Romanian storybooks (Wege et al., 2014). Overall, the study indicated that the culturally-appropriate emotional norms are reflected in popular storybooks in which children are exposed.



Though the study of emotions displayed on TV shows is scarce, several studies have shown that in working to acquire the information of emotions, children may be influenced by watching media characters in television (Dorr, 1985; Houle & Feldman, 1991; Cost & Feldman, 1995). Dorr (1985) has claimed that television and film might be particularly influential socializers of emotional expressions, given that powerful aesthetic and dramatic tools (e.g., music, visual effect, set design) allow for the display of emotional experiences with greater intensity and frequency than daily life. Furthermore, Coats and Feldman (1995) explored the relationship between the levels of television viewing and nonverbal behavioral skills (nonverbal emotional expression) among elementary school children. At first, participants watched ten film clips with a 15-sec pause followed by each clip. Then, participants were asked to pose facial expressions to convey five selected emotions in the film. The result showed that when children were put in experimental situations designed to evoke emotions, heavy TV viewers were more likely to show clear facial displays for frequently depicted emotions (happiness and sadness). In contrast, they are less likely to show clear nonverbal cues of those emotions that were infrequently displayed on TV (disgust and fear). The findings are consistent with Nabi, So, and Prestin's (2010) claim that repeated exposure to media role models of emotion might socialize viewers' perception of social norms and display rules, therefore, shaping their emotional expressions and emotional experiences.

Moreover, the study of emotional norms can provide us with important information about favorable emotional norms in one's culture. A previous content analysis of U.S children's television shows discovered that the depictions of happy, sad, and angry were unrealistically frequent compared to the sparse depictions of fear and disgust expressions (Houle & Feldman, 1991). Thus, Western cultures tend to value emotional experiences regarding happiness, sadness, and anger. Overall, prior research has demonstrated the essential role of television in informing

children's emotional experience in their society and shaping their emotional learning and expression. Therefore, the study generates the second research question:

*RQ 2:* What type of emotional norms are represented most frequently in children's TV shows?

As suggested above, the media can offer us insights regarding culturally-appropriate emotions in one's society. In fact, scholars have argued that experiencing positive emotions is universally desirable, and adults in all cultures are prone to encourage young children in expressing positive emotions (Cole & Tan, 2006; Diener & Lucas, 2004; Tsai et al., 2007). Diener and Lucas (2004) analyzed parents' expectations of children's emotional expressions by asking students in 48 different countries to rate statements such as "I hope my daughter will be happy" on 9-point scales. Respondents in all countries desired emotions with high levels of happiness for their children. This pattern suggests that caregivers generally want to evoke positive emotions rather than negative emotions in young children. In my study, I also expect that children's TV programs will show more positive emotions than negative emotions. Thus, I predict:

*Hypothesis 2 (H2):* Positive emotions will be depicted more than negative emotions in children's TV programs.

### *The Role of Emotions in Human Morality*

*The Association between Moral Foundations Theory and Emotions.* When discussing moral judgment/action, moral psychologists also argue its relationship with emotions. According to the rationalist's view of moral judgment, reasoning processes come prior to and will lead to an individuals' moral judgment, and moral affects like sympathy or empathy serve as inputs to the moral reasoning process. In contrast, the social intuitionist approach argues that moral intuition, which includes moral emotions, are the direct cause of moral judgment. In this view, automatic

intuitions and emotions often come first, without the process of reasoning and reflection (Haidt, 2001).

To better understand human morality, social intuitionist scholars believe that they should shift focus away from moral reasoning and pay more attention to the study of emotional processes (Haidt, 2001, 2003; Cialdini, 1991; Haidt and Joseph 2004, 2008). Haidt (2001, p.261) claims that "moral action covaries with moral emotions more than moral reasoning [does]". By referring to previous studies, he declares that moral behaviors are weakly linked to moral reasoning but strongly associated with moral emotions. To be specific, Blasi (1980) has denied the assumption proposed by some scholars that moral reasoning is positively related to moral action, considering their connection is merely a statistical correlation. He raises the possibility of intelligence as the third variable to improve the quality of moral reasoning. In other words, intelligence is also positively related to moral action without the intervention of better moral reasoning (Metcalf & Mischel, 1999). It means that any relationship between moral reasoning and moral action may be spurious. Hence, Haidt (2001) concludes that the connection between moral reasoning and moral action seems weak and inconsistent once the effect of intelligence is excluded. Instead, emotions may offer a better explanation.

Specifically, further evidence has shown that emotions are more crucial than moral reasoning to affect moral action. Cleckley's (1955) case study of psychopaths displayed a dissociation between emotions and moral reasoning. The psychopaths in the study understood the rules of social behaviors and the harmful consequences of violating them. But they did not care about these consequences because they were devoid of major affective reactions. The positron emission tomography techniques further revealed the association between emotions and moral behavior: patients with brain damage in the ventromedial area of the prefrontal cortex (VMPFC) had no problem with their reasoning abilities. They were clear regarding moral rules and social

conventions and showed normal abilities to resolve logic, financial problems, and even hypothetical moral situations. However, the patients became indecisive and showed poor judgment and irrational behavior when they encountered a real moral dilemma. The researcher explained this phenomenon by showing that patients with the destruction of VMPFC had no emotional responsiveness to the world, especially to one's behavior choice. Thus, with their emotional loss, the patients failed to make the decision in real moral situations and sometimes showed outrageous or antisocial behaviors (Raine, 1997; Damasio, 1994). Furthermore, many recent empirical studies which examined psychological and neurobiological processes underlying morality have added to a growing body of literature that reveals how emotion-related areas in the brain, such as VMPFC and hippocampus, contribute to moral judgment (Koenigs et al., 2007; McCormick et al., 2016).

The moral foundations theory (MFT) posits that specific moral foundations are linked with specific “characteristic emotions”: 1) care/harm--compassion; 2) fairness/reciprocity--anger, gratitude; 3) authority/respect--fear, respect; 4) in-group/loyalty---pride rage; 5) purity/sanctity---disgust (Haidt, 2003; Haidt & Joseph, 2004, 2008). Based on Haidt & Joseph (2008), the primary “characteristic emotions” are derived from each moral foundation to reflect its primary values and are crucial for the judgment of corresponding moral principles.

Furthermore, the MFT argues that a particular prototypical emotion is elicited by corresponding moral principle transgression: care/harm violations should trigger the emotion of compassion, fairness/reciprocity violation should trigger the emotion of anger, authority/respect violation should trigger the emotion of resentment, ingroup/loyalty violation should trigger the emotion of rage, and purity/sanctity violation should trigger the emotion of disgust. The rationale behind this hypothesis is that “we intuitively condemn certain behaviors because these behaviors elicit specific emotions” (Landmann & Hess, 2018, p. 43). In fact, this idea goes back to the CAD

triad hypothesis, which selects anger, contempt and disgust as dominant emotional reactions to autonomy, community and divinity violations (Rozin et.al., 1999). Haidt and Graham refined this idea, suggesting that care/harm and fairness/reciprocity as the foundation of the autonomy ethic, ingroup loyalty and authority/respect as the foundation of the community ethic, and purity/sanctity/sanctity as the foundation of divinity ethic.

Prior research has investigated the role of emotions in human morality by examining the links between moral domains and emotions. However, when participants are able to display mixed emotions, it becomes clear that these links are not exclusive (Landmann & Hess, 2018; Hofmann et al., 2014; Cannon, Schnall & White, 2011;). For example, in a diary study, there was no significant difference between the eliciting of anger at violations of fairness and other norm violations. (Hofmann et al., 2014). Landmann and Hess (2017) tested the hypothesis of moral foundation theory again. Participants were required to listen to stories about moral violations, including five violation types proposed in moral foundation theory. They were then asked to indicate their feelings on seven emotion labels (e.g., anger, rage, disgust, etc.). Their findings confirmed that the links between care/harm-compassion and purity/sanctity-disgust were consistent with the moral foundation theory hypothesis. But other emotions in the labels, such as anger, rage, resentment, were not related to any single moral foundation. Thus, there are both emotion-specific foundations (i.e., care/harm, purity/sanctity) and emotion-unspecific foundations (i.e., fairness, ingroup loyalty, authority) in the MFT.

Due to the inconsistent findings in the previous research, some scholars have declared that there is no evidence for specific correspondences between moral domains and discrete emotions (Cameron et al., 2015; Landmann & Hess, 2018). However, they still believe that there is a general correspondence between moral content and emotions. They have suggested that the links between emotions and moral foundations are not exclusive and should be more complicated

than the moral foundation theory proposed (Landmann & Hess, 2018; Cameron et al., 2015). Instead, each moral foundation is associated with a series of “characteristic emotions” (Landmann & Hess, 2018, 13). This less restrictive approach allows for mixed emotions but nonetheless implies that emotional reactions differ between the moral violations. That is, the “characteristic emotions” should trigger or be triggered more frequently by the proposed moral foundations (Landmann & Hess, 2018). However, the emotion-morality pairings are not unique. While there is disagreement about both the links between morality and emotions, there has been no systematic attempt to analyze their links presented in media content. Thus, the present study aims to examine the link between emotions and moral foundations in Western prosocial media. Since I classify the emotions as positive and negative valence, I ask:

*RQ3*: What is the relationship between positive valenced-emotions and moral foundations in MFT?

*RQ4*: What is the relationship between negative valenced-emotions and moral foundations in MFT?

### CHAPTER 3: RESEARCH METHODOLOGY AND DESIGN

#### *Procedure*

*Cartoon Selection.* Since the present study focuses on analyzing preschool children's TV programs, the sample includes three American cartoons targeted for preschool-aged children: *Daniel Tiger's Neighborhood* (Rogers & Santomero, 2012-present); *Peppa Pig* (Astley & Bake, 2004-present); *Arthur* (Charest et al., 1996-present). Following the selection criteria used in previous research for studying emotions or moral messages in media (Tsai et al., 2007; Tamborini, 2020), the first selection criterion refers to the popularity of the cartoon. The most popular preschool cartoons were identified through preschool cartoon rankings online (e.g., Bryson, 2016). Since these are popular and representative cartoons in the United States, many young children are likely to be exposed to them.

The second selection criterion refers to the genre of the cartoon. These cartoons were selected because they are intended to convey moral messages and have intense depictions of emotional expression. Both *Daniel Tiger's Neighborhood* (targeted at 2 to 4 years old), *Peppa Pig* (targeted at 3-7 years old), and *Arthur* (targeted at 4-8 years old) focus on the daily life story of the main characters, their family members, and friends, and they teach children important life lessons. Furthermore, many of their episodes link tightly with social-emotion themes and emphasize characters' experiences of various emotions such as happiness, sadness, frustration, and fear.

The third selection criterion refers to releasing years and the time of an episode. *Daniel Tiger's Neighborhood* was released in 2012, with 5 seasons and 104 episodes (about 20 minutes for each episode with two independent stories). *Arthur* was released in 1996, with 23 seasons and 236 episodes (about 30 minutes for each episode with two independent 11-minute stories). *Peppa Pig* was released in 2004, with 8 series and 303 episodes (about 5 minutes for each episode).

Since these three cartoons were released in different years, we randomly drew the samples from the recent seasons which were released from 2015-2020. What's more, because *Daniel Tiger's Neighborhood* and *Arthur* have two independent stories with the same theme for each episode, we only chose one story to code in order to match up with the time of two episodes of *Peppa Pig*.

*Coder Training.* Coders in this study were undergraduate or graduate students at Wake Forest University. All coders had to attend coder training meetings before coding the sample content. The primary coder (A) had to be familiar with Haidt & Graham's article (2007) and moral foundation theory (MFT). During the initial training meeting, the primary coder (A) introduced the conceptualization and operationalization for individual moral domain and emotion to the other two coders (B and C). Our coding manual integrated several coding schemes from previous studies (Tamborini et al., 2017; Hahn et al., 2017; Ekman & Rosenberg, 1997; Grady et al., 2019). For moral content, the coders coded the absence or presence of moral foundations in the sample content based on the MIME coding scheme (Tamborini et al., 2017). For emotion displays, all coders were trained and familiarized with the *Facial Action Coding System* (FACS) (Ekman & Rosenberg, 1997) and *Emotion Coding Scheme* in Grady et al. (2019)'s study to apply an analytical approach for coding emotions. Then, they practiced several examples and addressed the disagreements regarding the coding scheme. Coding of the sample content ensued after the coders agreed on the coding protocol.

We randomly assigned 20% of our sample to have all coders code for a final reliability check. Communication among coders during the final coding check was prohibited. In the present study, we used Krippendorff's (2004, 2012) alpha to assess the intercoder agreements.

Krippendorff suggests that a study that is more abstract in nature may have a lower value of intercoder reliability, with the criterion for intercoder reliability cut off at 0.66 for a content analysis that attempts to code abstract/theoretical concepts. Thus, this cutoff was adopted in our



study to decide if a moral foundation or emotion was deemed reliable enough for further coding. When the intercoder reliability was not acceptable, we either (a) randomly sampled more content for reliability-check purposes, (b) dropped/collapsed coding categories (Krippendorff, 2004). The intercoder reliability for all coding materials (i.e., moral foundations, verbal expression, nonverbal expression) is presented in Table 2.

*Cartoon Coding.* 20 episodes for *Daniel Tiger's Neighborhood* and *Arthur* and 40 episodes for *Peppa Pig* were randomly drawn from the recent seasons. For *Daniel Tiger's Neighborhood* and *Arthur*, since they both have two stories with similar themes for each episode, we either randomly chose one story or selected the story which emphasizes more on the main character's emotion.

Coders first identified the number of scenes in each episode based on previous studies (Lewis & Mitchell, 2014; Hahn et al, 2016). Each individual scene served as the unit of analysis in our study, and a scene was defined as an uninterrupted sequence of action or interaction between characters in a particular setting. The scene ends when there was a change in 1) characters' focus, 2) time frame or 3) new physical setting. We excluded commercials, as well as opening and closing songs from the coding. The scene is utilized as the unit of analysis since a scene is the basic foundational block of every television narrative that moral domain representation can be best understood by the audience. The intraclass correlation coefficient (ICC) = .95 for number of scenes present. In total, the study resulted in  $N= 652$  scenes ( $n_{daniel\ tiger} = 256, n_{peppa\ pig} = 188, n_{arthur} = 208$ ).

The coders identified the main character (or characters) according to the frequency of their appearance. More than one main character was identified if several characters appeared in the same number of scenes. All episodes contained one or two main characters. The intraclass correlation (ICC) = .98 for the number of characters present. For each episode, we first identified

the absence or presence of moral foundations in each scene. In this way, 141 Moral domains were coded in 139 scenes ( $n_{daniel\ tiger} = 47$ ,  $n_{peppa\ pig} = 32$ ,  $n_{arthur} = 62$ ). Then we coded the absence or presence of discrete emotions primarily based on the nonverbal (facial expression and body posture and gesture) expressions of the main character in each scene. But we also integrated verbal expressions (emotion terms) and contextual information into coding the types of emotions. Pictures were considered un-codeable if the character's face was not shown. Five hundred and sixty-nine emotions displayed by the main character (s) were observed in 543 scene ( $n_{daniel\ tiger} = 180$ ,  $n_{peppa\ pig} = 204$ ,  $n_{arthur} = 179$ ). Finally, we analyzed the main characters' emotional reactions to the conformity (positive-valence) or transgression (negative valence) of six moral principles in 134 scene.

### *Measures*

*Types of Emotions.* Fourteen discrete emotions were included, based on Ekman and Friesen's (1969, 1975) and Wege et al. 's (2014)'s work. Discrete emotions contain six basic emotions (*happiness, surprises, anger, sadness, disgust, fear*) and others that are part of a "wider array of emotions" (*contentment, love, pride, guilt, frustration, worry, dislike, contempt*). The definition of each emotion was based on previous research on emotional expression (e.g., Tracy & Robins, 2004; Tracy, Robins & Schriber, 2009; Tsai et al., 2007). Emotions were further divided into positive emotions (e.g., *happiness, love*) and negative emotions (e.g., *anger, sadness*). Each discrete emotion was identified in cartoons based on both verbal and nonverbal expression.

*Verbal Expression Coding.* For each display of discrete emotion, the coder captured the primary emotion term in the conversation, which best represented the type of emotion expressed by the main character, and labeled it in the verbal emotion talk category. The verbal emotion terms include (1) Emotion State Terms (e.g., "sad", "happy", "mad," "proud"), (2) Emotion Verbs

(e.g., “sacred”, “scream”, “yell”), (3) Emotion Interjections (e.g., “wow”, “oops”), (4) Emotional Preferences (e.g., “love”, “hate”, “favorite”), (5) Emotion-laden Attributions (e.g., “funny”, “awful”, “crabby”) and (6) Ambiguous (there is a strong indication that an emotional reference is being expressed, but the category of emotion talk is unclear). The inter-coder reliabilities for verbal expression variables across the three coders were acceptable for each individual coding with a mean Krippendorff's alpha ( $\alpha$ )= 0.86 ranging from 0.76 to 0.95 (See Table 1).

*Nonverbal Expression Coding.* The nonverbal emotional expression was coded primarily based on the face and body (gesture and posture) of the character. The coding scheme for nonverbal emotional expression combined the Facial Action Coding System (FACS) (Ekman & Rosenberg, 1997) and Emotion Coding Manual for storybooks in Grady et al. (2019)'s study. The three coders were trained and familiarized with the Facial Action Coding System (FACS) and Emotion Coding Manual to apply an analytical approach for coding. The criteria of Final Emotion Coding Manual were provided for both positive emotions (e.g., *surprise* was coded when brows and eyelids were raised, mouths were round and open, and posture showed open hands and backward movement) and negative emotions (e.g., *anger* was coded when brows were furrowed, eyes were narrowed, the mouth was open and yelling or pressed together, and posture showed movement forward, often with clenched fists, raised arms, or stamping feet). The inter-coder reliabilities for discrete emotion variables across the three coders were mostly acceptable for each individual emotion coding with a mean Krippendorff's alpha ( $\alpha$ )= 0.87 ranging from 0.71 to 1.0 (see Table 1). Due to the low reliability of frustration and sadness and their conceptual similarity, we collapsed the category “sadness” and “frustration” as one category. Furthermore, the emotion categories of “guilt”, “contempt”, and “pride” were omitted from the list because of their rare observations.

*Moral Domains Coding.* To develop a coding manual of moral domain representations, the present study referred to Haidt and Joseph (2007) who provide a broad domain of adaptive triggers (e.g., suffering, distress, or threat to one's kin for harm/care) related to each domain. They further claim that the broad adaptive function of each domain is manifested in specific virtues (e.g., kindness and caring for the harm/care foundation) and vices (e.g., harm, cruelty and indifference for the harm/care foundation). In order to code these abstract concepts, Tamborini et al. (2017) built the coding manual of moral domains by outlining the definition of virtues/vices. Then, they operationalized each moral domain by listing specific “behavioral correlates” of these virtues and vices. The present study revised the MIME coding manual developed by Hahn et al. (2017) to code moral domains in MFT. The operationalized definition of each moral domain is shown in Table 2.

The coding manual allowed us to code the moral domain in media content. The behavioral correlates identified by the coding manual are behaviors, which manifest the potential virtues (positive-valence) and vices (negative valence) of each moral domain. Thus, coders could identify the presence/absence of each moral domain in the scene and its valence. For instance, Haidt and Joseph identify kindness as one of the virtues (positive valence) for the *care/harm* domain. In the coding manual, the behaviors correlates of kindness refer to the act of showing a deep awareness of, and concern for another's physical and emotional suffering (e.g., when watching others suffering, weep, cry, you ask "are you OK? Do you need any help?"). They identify harm as one of the vices (negative--valence) for the *care/harm* domain. The behaviors correlates of harm refer to the act of causing another's physical or emotional pain, or planning to put another in jeopardy of physical or emotional pain (e.g., Hit, beat, kick; "You are a loser/idiot!").

Similarly, the coding manual specifies a set of behavioral correlates that are relevant to all five moral foundations. What's more, we added *inclusion/exclusion* and its behavior correlates in the coding manual (e.g., you treat Sam, who is in a wheelchair, as the same as the rest of your classmates). The interrater reliabilities for moral foundation variables across the three coders were acceptable for distinct moral foundation coding with a mean Krippendorff's alpha ( $\alpha$ ) = 0.88 ranging from 0.71 to 1.0 (see Table 1).

**Table 1***Intercoder Reliability for Coding Categories*

Categories	Subcategories	Percentage agreement(%)	Krippendorff's alpha ( $\alpha$ )	Reliability Value
Moral Foundations				
	Care/Harm	85.7	0.71	Good
	Fairness	95.0	0.92	Good
	Ingroup Loyalty	93.6	0.88	Good
	Authority	87.6	0.78	Fair
	purity/sanctity	100	1.0	Good
	Inclusion	100	1.0	Good
Verbal Expression				
	Emotion State Terms	94.4	0.83	Good
	Emotion Verbs	93.6	0.84	Good
	Emotional Preferences	98.8	0.92	Good
	Emotional Injections	98.0	0.95	Good
	Emotion-lade Attributions	89.0	0.76	Fair
Nonverbal Expression				
	Happy	93.6	0.83	Good
	Content	88.0	0.71	Fair
	Surprise	98.0	0.94	Good
	Love	98.6	0.96	Good
	Anger	98.0	0.95	Good
	Sad	89.0	0.74	Fair

Disgust	95.3	0.87	Good
Fear	100	1.00	Good
Pride	--	--	Undefined
Dislike	100	1.00	Good
Contempt	--	--	Undefined
Frustration	--	--	Undefined
Worry/fretful	88.0	0.76	Fair
Guilt	--	--	Undefined

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*Note.* Due to the low reliability of frustration and sadness as the separate category and their conceptual similarity, these two categories were combined to form a single emotion category---sad. Pride, guilt and contempt were omitted from the list.

**Table 2***Operational Definitions for Six Moral Domains*

	Valence Coded	When an Exemplar Expressed:
<b>Moral Domain</b>		
<b>Care/Harm</b>	Positive	Concern towards helping others in need (e.g., compassion, empathy and sympathy)
	Negative	Causes harm or ignores others' need
<b>Fairness</b>	Positive	Interests in ensuring equitable and justified distribution of resources, or honesty at a cost to self
	Negative	Favor towards injustice, unequal distribution of resources, or cheating/lying
<b>Ingroup Loyalty</b>	Positive	Devotion to any type of group membership (including a favoritism for the in-group and suspiciousness or bias against outgroup)
	Negative	Betrayal or departure of his/her ingroup and/or joining another outgroup
<b>Authority</b>	Positive	Obedience/Deference to respect the wishes of hierarchical and benevolent authority figure, as well as accept power structure
	Negative	Disobedience/Defiance to disrespect the wishes of hierarchical and benevolent authority figure, as well as reject power structure
<b>purity/sanctity</b>	Positive	Interest in the temperance of hedonistic pleasure/other basal impulses and god-like behavior
	Negative	A desire to pursue hedonistic pleasure and interest in sacrilege animal-like behavior



<b>Inclusion</b>	Positive	Tolerance to people outside the group (of social differences)
	Negative	Favoritism towards inter-group members and intolerant attitudes to people outside the group( of social differences)

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## CHAPTER 4: RESULTS

A total of 652 scenes were coded for three cartoons ( $n_{\text{daniel tiger}} = 256$ ,  $n_{\text{peppa pig}} = 188$ ,  $n_{\text{arthur}} = 208$ ). 141 moral domains were coded in 139 scenes ( $n_{\text{daniel tiger}} = 47$ ,  $n_{\text{peppa pig}} = 32$ ,  $n_{\text{arthur}} = 62$ ). And 569 discrete emotions displayed by main characters were coded in 543 scenes ( $n_{\text{daniel tiger}} = 180$ ,  $n_{\text{peppa pig}} = 204$ ,  $n_{\text{arthur}} = 179$ ). The remaining scenes (109 scenes) were coded as uncodeable, ambiguous or neutral. At first, we included gender as an independent variable. Since we did not find the effects between gender and other variables, we reported the analyses without gender.

*Moral Domains.* The first research question (RQ1) asked which moral domains in MTF would appear most frequently in preschool TV shows. We predicted that care/harm and fairness foundations would be displayed more in preschool TV shows. In general, a total number of 134 scenes were coded as moral domains depicted ( $n=141$ ). Frequencies and percentages of moral foundations are presented in Table 3. The frequency distribution for six moral principles showed that the *care/harm* foundation was the dominant moral foundation in all three cartoons (50.3%,  $n=71$ ) followed by *authority* (19.9%,  $n=28$ ). The moral domain of *fairness* appeared more (14.2%,  $n=20$ ) than *ingroup loyalty* (7.8%,  $n=11$ ). Interestingly, *inclusion* (5.7%,  $n=8$ ) and *purity/sanctity* (2.1%,  $n=3$ ) were rarely depicted in prosocial TV shows.

A one-way chi-square goodness of fit test was conducted to determine whether observed frequencies of six moral foundations differed from randomness. Expected frequencies in all cells were greater than five, so a test could be performed. The results showed that the portrayals of *care/harm* foundation differed statistically significantly from the other five moral foundations,  $\chi^2(5, N = 141) = 132.15$ ,  $p < 0.001$ . The care/harm foundation was significantly more frequently represented in children's television shows, supporting hypothesis 1.

We also examined proportions of moral foundation representations in television shows by cartoon groups. Surprisingly, the portrayals of moral foundations in *Arthur* (n=62) differed statistically significantly from the portrayals of moral foundations in *Peppa Pig* (n=32) and *Daniel Tiger's Neighborhood* (n=47),  $X^2(2, N = 141) = 9.57, p = 0.01$ . Specifically, Arthur showed significantly more *fairness* foundation representations (n=13) than *Daniel Tiger's Neighborhood* (n=5) and *Peppa Pig* (n=2),  $X^2(2, N = 20) = 9.70, p = 0.01$ .

**Table 3***Observed Frequencies and Percentages of Moral Foundations in TV Shows*

Moral Foundation	Total	Cartoons group		
		Daniel Tiger	Peppa Pig	Arthur
Care/Harm	71(50.3)	25(53.2)	15(46.7)	31(50.0)
Fairness	20(14.2)	5(10.6)	2 (6.3)	13(21.0)
Authority	28(19.9)	12(25.5)	10 (31.3)	6(9.7)
In-group Loyalty	11(7.8)	2(4.3)	3(9.4)	6(9.7)
purity/sanctity	3(2.1)	--	--	3(4.8)
Inclusion	8(5.7)	3(6.4)	2(6.3)	3(4.8)
Total	141(100)	47 (100)	32(100)	62 (100)

*Note.* Percentages are in parentheses.

*Emotions.* The second research question (RQ 2) asked which moral emotions would be displayed most frequently in preschool TV shows. We predicted that positive emotions would appear more compared to negative emotions. Positive emotion displays consisted of *happiness, contentment, surprise, love, pride*. Negative emotion displays consisted of *anger, sadness, disgust, fear, dislike, contempt, worry/fretfulness, guilt*. Overall, across 80 episodes for three prosocial television shows, positive emotions were displayed more frequently than negative emotions (about 74.3% positive emotions and 25.7% negative emotions). A one-way chi-square goodness of fit test whether observed frequencies of positive and negative emotions differed from randomness. Expected frequencies in all cells were greater than five. Positive emotion displays in cartoons differed statistically significantly from negative emotions,  $\chi^2 (1, N=569) = 134.85, p < .001$ . The result supported hypothesis 2, indicating that positive emotions were significantly more frequently displayed in children's cartoons. Interestingly, *Daniel Tiger's Neighborhood* (n=145) and *Peppa Pig* (n=165) showed significantly more positive emotion displays than Arthur (n=110),  $\chi^2 (2, N=420) = 11.07, p = .004$ . Conversely, Arthur showed significantly more negative emotion displays (n=69) than *Daniel Tiger's Neighborhood* (n=35) and *Peppa Pig* (n=39),  $\chi^2 (2, N=143) = 14.49, p = .001$ .

Next we examined the frequency of discrete emotion portrayals in the TV shows. Frequencies and percentages of discrete emotions are presented in Table 4. The frequency distribution for discrete emotions revealed that among positive emotions, happiness was the most prevalent emotion in all prosocial TV shows (46.6%, n=265) followed by contentment (15.8%, n=90) and surprises (6.5%, n=37). However, pride was rarely depicted in children's TV shows (0.5%, n=3). Among negative emotions, worry/anxiety was the dominant emotion (7.9%, n=45) followed by sadness (6.3%, n=36) and anger (4.2%, n=24). Guilt (0.2%, n=1) and contempt (0.4%, n=2) were portrayed rarely in all three cartoons. Pride, guilt and contempt were omitted

from analyses due to their infrequent observations in children's TV shows. Overall, a one-sample chi-square test indicated significant differences in the displays of positive emotions (i.e., happiness, contentment, love, surprise),  $X^2(3, N=411) = 326.61, p < .001$ , as well as negative emotions (i.e., sadness, anger, fear, disgust, dislike worry),  $X^2(5, N=143) = 42.83, p < .00$ .

**Table 4***Observed Frequencies and Percentages of Discrete Emotions in TV Shows*

Discrete Emotion	Total	Cartoons group		
		Daniel Tiger	Peppa Pig	Aurthur
Happy	265(46.6)	93(51.7)	101 (49.5)	71 (39.7)
Content	90(15.8)	28(15.6)	32 (15.6)	30 (16.8)
Surprises	37(6.5)	4(2.2)	28 (13.7)	5(2.8)
Love	28(4.9)	20(11.1)	4(2.0)	4(2.2)
Pride	3(0.5)	--	--	--
Sad	36(6.3)	8(4.4)	10(4.9)	18(10.1)
Anger	24(4.2)	8(4.4)	4(2.0)	12(6.7)
Disgust	8(1.4)	1(0.6)	2(1.0)	5(2.8)
Contempt	2(0.4)	--	--	--
Fear	18(3.2)	5(2.8)	5(2.5)	8(4.5)
Dislike	12(2.1)	4(2.2)	3(1.5)	5(2.8)
Worry	45(7.9)	9(5.0)	15(7.4)	21(11.7)
Guilt	1(0.2)	--	--	--
Total	569(100)	180 (100)	204(100)	179 (100)

*Note.* Percentages are in parentheses.

Due to the low frequency of pride, contempt and guilt, these observations were omitted.

*The Co-occurrence between Emotions and Moral Foundations.* The third research question (RQ 3) asked about the relationship between emotions and moral foundations. Frequencies of co-occurrences for discrete emotions and moral foundations are reported in **Table 5**. To test whether specific emotions were related to specific moral foundations, the chi-square test for independence was performed to examine the co-occurrence between emotions and five moral foundations as well as inclusion/exclusion. We excluded those emotions (i.e., pride, contempt, guilt) as well as moral foundations (i.e., purity/sanctity, fairness-negative valence, in-group loyalty-negative valence, and inclusion-negative valence) that rarely occurred (below five times) in the television shows for further analyses. However, from the table, we still noticed that all *purity/sanctity* foundations (n=3) were portrayed within the co-occurrence of *disgust* displays.



**Table 5.***Frequencies of Co-occurrences for Discrete Emotions and Moral Foundations*

Emotion	Moral Foundations											
	Care/Harm		Farniess		Authority		In-group loyalty		purity/sanc tity		Inclusion	
	+(52)	-(19)	+(16)	-(4)	+(20)	-(8)	+(7)	-(4)	+(2)	-(1)	+(6)	-(2)
Happy	25	2	9	1	11	--	4	--	--	--	4	1
Content	8	1	2	--	8	--	2	--	1	--	2	--
Surprise	1	2	--	--	--	--	--	--	--	--	--	--
Love	9	--	--	--	2	--	2	--	--	--	2	--
Pride	--	--	--	--	--	--	1	--	--	--	--	--
Sad	4	4	2		--	2	--	1	--	--	--	1
Anger	--	5	5	1	--	3	1	1	--	--	--	--
Disgust	--	--	--	--	--	--	--	--	2	1	--	--
Contempt	--	--	--	--	--	1	--	--	--	--	--	--
Fear	--	1	--	--	6	--	--	--	--	--	--	--
Dislike	--	2	--		--	1	1	2	--	--	--	1
Worry	10	4	1	2	2	--	--	1	--	--	--	--
Gulit	--	--	--	1	--	--	--	--	--	--	--	--
Total	57	21	19	5	28	7	11	4	3	1	8	3

*Note.* Frequencies of moral foundations are in parentheses.

The results showed that the co-occurrence between the *care/harm* foundation-positive valence and *love* was statistically significant,  $X^2(1, N=141)=8.71, p<0.01$ . According to the results, 17.3% *care/harm* foundations-*positive* valence were displayed within the co-occurrence of *love*. Furthermore, a chi-square test was conducted to examine the co-occurrence between the *care/harm* foundation-*negative* valence and *love*. Since 25% cells have expected count less than 5, we reported Fisher's exact test instead in this situation. Statistical analysis (two-sided Fisher's exact test) confirmed that the occurrence of *care/harm* foundations-*negative* valence depended on the displays of *anger* ( $p=.04$ ). 26.3% *care/harm* foundations-*negative* valence was displayed within the co-occurrence of *anger*.

For the *fairness* foundation-*positive* valence, primary outcome results (two-sided Fisher's exact test) also confirmed that its occurrence depended on the display of *anger* ( $p=.02$ ). 31.3% *fairness* foundation-*negative* valence was portrayed within the co-occurrence of *anger*.

The chi-square test for independence also found the significant co-occurrence between the *authority* foundation-*positive* valence and *contentment*,  $X^2(1, N = 141) = 20.02, p < .01$ . 40% *fairness* foundations-*positive* valence was portrayed within the co-occurrence of *contentment*. Moreover, primary results (two-sided Fisher's exact test) indicated the occurrence of *authority* foundation-*positive* valence depended on the displays of *fear* ( $p < .01$ ). 30 % *authority* foundations-*positive* valence was displayed within the co-occurrence of *fear*. For the *negative* valence, statistical analysis (two-sided Fisher's exact test) confirmed that the presence of *authority* foundations depended on the displays of *anger* ( $p = .05$ ). 37.5% *authority* foundations-*negative* was represented within the co-occurrence of *anger*. Interestingly, we did not find any significant relationship between the *in-group loyalty* foundation and *inclusion/exclusion* with discrete emotions.

## CHAPTER 5: DISCUSSION

### *Summary of Results*

In their study, Haidt & Joseph (2004, 2008) created a social psychological theory--called moral foundations theory--seeking to explicate human morality on the basis of five innate, modular moral foundations. The theory argues that specific moral foundations are linked to specific "characteristic emotions." In fact, the idea can be traced back to the CAD-triad hypothesis, which predicts anger, contempt, and disgust are typically triggered by moral violations of autonomy (care/harm, fairness/reciprocity), community (ingroup/loyalty/ authority respect), and divinity (purity/sanctity) (Shweder, Much, Mahapatra & Park, 1997). The current findings confirm these predictions but add greater nuance.

Much recent empirical work (e.g., Landmann & Hess, 2018; Hofmann et al., 2014; Cannon, Schnall & White, 2011) has pointed out that the picture might be more complex than moral foundations theory suggests. Specifically, the foundation-emotion links were not exclusive and only partially aligned with moral foundation theory. That is, there was no specific but only general correspondence between emotions and moral content (Cameron, Lindquist & Gray, 2015). Based on this idea, the present study employed the MFT as a framework to examine what is being presented in prosocial media regarding moral foundations, emotions, and their linkage. As a pervasive theme in prosocial media, the study also added inclusion/exclusion as an individual category of moral foundation

Overall, the findings in the current study indicated that the care/harm foundation was the dominant foundation in prosocial television shows. Additionally, the fairness/reciprocity foundation and authority/respect foundations also occurred more frequently compared to other moral foundations. Moreover, consistent with expectations and previous research, the study found that positive emotions were portrayed more frequently than negative emotions in preschool

television shows. Finally, the present study asked a research question about the relationship between emotions and moral foundations. Our findings have suggested a general but not a specific correspondence between discrete emotions and moral domains. Specifically, anger was strongly associated with both positive fairness/reciprocity, negative authority/respect, and negative care/harm foundation. Love was strongly associated with the positive care/harm foundation. There was also a significant relationship between the emotions of fear, contentment and the positive authority/respect foundation. Interestingly, ingroup/loyalty foundation and inclusion/exclusion were not associated with any discrete emotion.

### *Theoretical Implication*

*Moral Messages in Preschool Television Shows.* Considering the role of prosocial media in childhood socialization, the present study investigated the portrayals of moral messages in preschool television shows. Expectedly, the care/harm and fairness/reciprocity foundations were depicted proportionally more than other moral foundations. The findings are in line with Haidt & Graham's theory (2007) and past studies. While reviewing the CAD-triad hypothesis, Haidt & Graham defined care/harm and fairness/reciprocity as the psychological foundation of autonomy ethics. Further, scholars (Cingel & Krcmar, 2016, 2019; Haidt & Graham, 2007; Teper et al., 2015; ) claimed that people are more concerned about moral principles regarding care/harm and fairness/reciprocity in the West. Given that the sample was drawn from western prosocial media, the results demonstrated that care/harm, fairness/reciprocity foundations, consistent with individualistic values of autonomy and independence, are emphasized more in Western cultures.

The authority /respect foundation was also depicted frequently in preschool TV shows. One possible explanation may be that teaching children to respect authority is an important lesson and skill as they move into preschool years. For example, Smith (2014) has implied that behaviors such as arguing and issuing orders may seem adorable for toddlers but can immediately

become annoying as they grow up. Therefore, teaching preschoolers to respect authority will allow them to build a better relationship with teachers in kindergarten and prepare them for successful interactions with other authority figures in the future. Hence, it is comprehensible that the authority/respect foundation was depicted frequently with the intention of teaching children to interact and respect authorities (e.g., teachers, parents, other adults) in preschool television shows.

Results also compared specific moral foundations in different shows. Specifically, *Arthur* showed more portrayals of moral foundations compared to *Daniel Tiger's Neighborhood* and *Peppa Pig*, especially the portrayals of fairness/reciprocity foundation. Conversely, though it was not significant, *Daniel Tiger's Neighborhood* and *Peppa Pig* had more depictions of authority/respect than *Arthur*. The potential explanation may be that age influences the representation of moral foundations in prosocial television shows. *Daniel Tiger's Neighborhood* and *Peppa Pig* are mainly targeted at preschoolers. However, *Arthur* is designed for both older preschool and younger school children. In their study, Mares and Acosta (2008) found that kindergarteners showed a cognitive burden to comprehend intended moral lessons in prosocial media. Therefore, the television show for slightly older children may have more portrayals of moral foundations as they develop better cognitive processing skills to comprehend a complex storyline. Moreover, television programs for toddlers and younger preschoolers are often selected by caregivers rather than children themselves. Therefore, the increased occurrences of authority/respect foundation in prosocial media for younger age children may be a reflection of parental expectations to instill values of respect and authority in their children. Further, past studies also have demonstrated that older children were more likely to show fairness preference than younger children, suggesting that inequity aversion develops with age in early childhood (Li, Wang, Yu & Zhu, 2016; Rizzo, Elenbaas, Cooley & Killen, 2016). Hence, it is understandable

that *Arthur* has more depictions of fairness foundations than *Peppa Pig* and *Daniel Tiger's Neighborhood*.

Taken together, past research has mainly examined the effects of moral messages on children when exposed to the media. The present study aims at showing what moral content young children are often exposed to. It adds to the literature by demonstrating the dominance of care/harm, fairness/reciprocity, and authority/respect foundations in Western preschool television programs. These findings also have indicated the emphasis on the moral values of care, fairness, and authority in Western cultures.

*Emotion Displays in Preschool Television Shows.* Besides moral messages, the present study examined the portrayals of discrete emotions in prosocial television shows. In general, we found that positive emotions were portrayed proportionally more than negative emotions in western prosocial television shows. In accordance with past research on emotion displays in media (Diener and Lucas, 2004; Wege et al., 2014; Tsai et al., 2007; Grady et al., 2019), the findings further support the notion that evoking positive emotions rather than negative emotions in young children are more expected by caregivers.

Another possible reason for the emphasis on positive emotions may be the cognitive limitations in the young age group. A large body of research has demonstrated that young children often showed poor performances on a variety of cognitive tasks requiring sustained attention, memory, and information processing (e.g., Carlozzi, Beaumont, Tulsy & Gershon, 2015). In contrast, older children may develop better cognitive abilities to comprehend more complex media content. Thus, television shows for slightly older children may display a broader range of emotions than cartoons for young children. The assumption also can be supported by this study. *Arthur*, which was designed for a relatively older age group than *Daniel Tiger's*

*Neighborhood* and *Peppa Pig*, also showed less positive emotions and a larger range of emotion displays.

Among negative emotions, anger was displayed frequently in preschool television shows. Individualistic cultures perceive people as the most important social unit, with a strong emphasis on children's self-sufficiency, sense of autonomy, and independence. The United States is a culture rooted in the tradition of Christian thought that promotes the value of individual satisfaction. Therefore, the "ego-focused" emotions such as anger and disgust are favored by caregivers (Eid, 2009; Triandis, 1994). Further, Wege et al. (2014) and Grady et al. (2019) showed that American families, valuing self-assertion and autonomy, often encourage their children to express more assertive/powerful negative emotions such as anger and dislike. Our findings mirror past studies, which demonstrated that the display of anger is not negatively evaluated in countries with individualistic beliefs.

Interestingly, self-conscious emotions such as guilt and pride were rarely portrayed in television shows. Authors and producers of cartoons may assume that young children cannot easily comprehend self-conscious emotions as these types of emotions begin to develop in preschool years (Lewis, 2008). What's more, guilt viewed as a threat to children's self-esteem is strongly discouraged in individualistic cultures (Eid, 2009; Triandis, 1994; Triandis, 1995; Doan & Wang, 2010).

Overall, prior research has indicated that people's beliefs and expectations on children's understanding and expression of emotions in different cultures/societies are reflected in popular media, and they are in turn internalized by children through their exposure to the media. In this way, the media can provide an essential resource for us to study culturally emotional norms, therefore shaping a better understanding of emotional socialization. Several studies have investigated emotion displays in storybooks across different cultures (Wege et al., 2014; Tsai et

al., 2007; Grady et al., 2019). However, studying emotion displayed on other media resources such as children's TV shows is still scarce. The current study further provides evidence that emotional norms in media are consistent with broader cultural values. It also shed light on how to study emotional-norm through different socialization media.

*The Links Between Moral Foundations and Emotions.* Finally, the present study asked a research question about the relationship between emotions and moral foundations. The results supported the extensively affirmed link between moral principles of fairness/reciprocity and anger (Montada & Schneider, 1989; Weiss, Suckow, & Cropanzano, 1999). However, the findings also indicated that anger was not solely associated with fairness as proposed by moral foundation theory. Rather, anger was related to other moral foundations such as care/harm and authority/respect. Therefore, the unique link between the fairness/reciprocity foundation and anger (Cronin, Reysen, & Branscombe, 2012; Montada & Schneider, 1989) was not replicated in this study. One possible explanation may be that moral anger is highly associated with the attribution of harm and intentionality (Russell & Ginger-Sorolla, 2011). What's more, intention is crucial for the moral judgment of care/harm, fairness/reciprocity, authority/respect and ingroup loyalty (not purity/sanctity) as they may be contingent on intentional processes (Young & Saxe, 2011). Therefore, anger seems to be an unspecified emotional reaction, which is associated with a variety of intentional moral/immoral behaviors. From a child perspective, it may indicate that caregivers encourage their kids to express anger to show their intent in a moral situation in Western cultures.

Results from this research also indicated that love was strongly related to the care/harm foundation. Landmann and Hess (2018) confirmed the association between the care/harm foundation and compassion in their experiment. Implying a general dislike of suffering, the care/harm foundation values the virtues of compassion, caring, and kindness (Haidt and Joseph,



2008). In contrast, love refers to a caring relationship between two or more people and combines the principles of kindness, empathy, compassion, and consideration (Horne, 2021). Therefore, in accordance with the findings in Landmann and Hess (2018), the link between love and care/harm foundation seems predictable in the present study. Further, love is one of the other-praising emotions which motivates prosocial and affiliative behavior (Algoe & Haidt, 2009).

Interestingly, we found that the authority foundation was not only associated with fear---the link theorized by Haidt and Joseph in MFT. Rather, the authority foundation was also related to the emotion of contentment. Haidt and Joseph (2008) stated that fear arises in the authority foundation when superiors maintain social order within the group through forms of physical force or psychological oppression. However, in a recent study, scholars claimed that "by valuing authority and respect, social life functions fluidly because the need for physical force and fear decreases, replaced by voluntary deference" (Prince, 2010, p. 1297). Contentment is a calm expression of positive emotions, which represents an individual's satisfaction and acceptance regarding his life situation and condition. Also, contentment is often not influenced by external forces (McKenzie, 2016; Tsai et al., 2007; Grady et al., 2019). Contentment is valued more favorably by collectivistic cultures as it consists with the values of social harmony and unity (Tsai et al., 2007; Grady et al., 2019; ). Therefore, the linkage between contentment and authority in prosocial television may indicate adults' expectation for children's admiration/awe to authority figures and voluntary deference to hierarchy social structure. Caregivers hope that children can learn to respect authority at an early age which will enable them to develop successful relationships with authority figures such as teachers and coaches in the future.

Although we excluded purity/sanctity foundation from the chi-square test due to its rare observations, we still noticed that all purity/sanctity foundations were portrayed within the co-occurrence of disgust. In their study, Landmann & Hess (2018) found that the link between the

purity/sanctity foundation and disgust is highly specific. Therefore, disgust may be a highly specific emotion, which is elicited only by the purity/sanctity foundation. As previous research indicates, disgust functions as a "guardian of the body", and it has evolved to a social emotion associated with body norm violations (Haidt & Joseph, 2008, p. 106; Prince, 2010). Moral disgust independent of anger is insensitive to intentionality as well as harm. The purity/sanctity/sanction foundation, an evolutionary by-product of moral disgust, is not relevant to intentionality as much as other moral foundations (purity/sanctity violations are not necessarily intentional) (Russell & Ginger-Sorolla, 2011). Hence, moral disgust can play a role in moral judgment but may only affect the evaluation of purity/sanctity in some situations.

Surprisingly, the ingroup loyalty foundation and inclusion/exclusion were not significantly associated with any discrete emotion. But they were displayed within the co-occurrence of different types of emotions. Consistent with prior findings (Landmann & Hess, 2018), the results further proved that ingroup/loyalty is an emotion-unspecific foundation. Scholars have argued that all the emotions relating to trust, patriotism, heroism, and sacrifice could arise in this foundation (Prince, 2010). Inclusion/exclusion, as a moral concept relating to the group and social relationships, is highly associated with the moral principle of ingroup/loyalty. Therefore, similar to ingroup loyalty, it also can be triggered by a variety of discrete emotions, but it is not significantly linked to any emotion.

Taken together, these findings suggest that each moral principle can lead to a mixture of different emotions. However, the emotional responses may differ in a degree: disgust may be a specific emotional reaction in that it is only associated with purity/sanctity. In contrast, anger is an unspecific emotion, which links to all the moral foundations that may be attributed to intention except for purity/sanctity. Love can be triggered by several moral foundations (ie., care/harm, ingroup-loyalty, authority) but may be highly specific to the care/harm foundation. The authority

foundation is not only associated with fear as moral foundations theory suggests but also associated with contentment. The results imply modification of the moral foundations theory since the rationale that moral foundations are rooted in typical emotional systems theorized by MFT appears only to be true for a limited set of situations. In other words, even though there is some general correspondence between morality and emotion in children's media, the relationship between specific kinds of moral domains and specific discrete emotions is not exclusive.

### *Practical Implications*

Combined, these findings have practical implications for parents, educators, and cartoon producers. When children are watching television shows, they may receive important opportunities to learn social-cultural norms including culturally-appropriate moral values and emotional norms. Parents and educators should gain insight into the moral cultivation in prosocial media and its potential for emotional socialization. These findings suggest that it may be vital for adults to select for children television shows that portray emotions and moral messages that are valued in their given culture.

Moreover, these findings hold crucial implications for the design of prosocial media in the future. Prior research already proved that adding moral lessons in prosocial shows has positive effects in terms of children's moral development (Cingel & Kremer, 2019). However, these data indicate the connections between emotions and moral foundations, which invites cartoon designers and parents into speculation about the characters' emotional expressions in a moral situation. In this way, being socialized through prosocial shows, children may be taught to form the alignment between their private feelings and normative (cultural) expectations of emotional expressions when encountering different moral situations.

### *Limitations and Future Directions*

The current study has several important limitations. First, the sample size was not big enough to analyze all the statistical relationships. Specifically, the results for moral foundations and their association with discrete emotions are limited due to the rare occurrences, especially ingroup/loyalty, purity/sanctity foundation and inclusion/exclusion as well as negative emotions. The sample size may limit our ability to generalize our findings. Future research should include more episodes and different types of television shows to gain more detailed insight.

Second, referring to Tsai et al. (2007) and Wege et al. (2014), we selected FACS for nonverbal emotional expression coding. However, Tsai et al. (2007) mainly focused on positive emotions and Wege et al. (2014) restricted their coding to storybooks. As we expand to prosocial television shows, the coding becomes more complicated. What's more, instead of coding six basic emotions, we tried to code a larger range of emotions. Therefore, we decided to combine the Emotion Coding Manual in Grady et al (2019)'s study. We also integrated context information and verbal emotional expression into coding the types of emotions. Although the intercoder reliability was satisfactory for most emotions, future study should aim to improve their coding system.

Third, we primarily focused on examining western television shows. Thus, we did not consider the cultural variations regarding moral values and emotion displays in this study. However, cultural environments may impact people's emotional expression and moral judgment due to the discrepancies of cultural values between different countries. For example, collectivistic culture values ingroup loyalty and purity/sanctity as much as other moral foundations. Hence, it remains uncertain whether the current findings can reflect cultures for which ingroup loyalty and purity/sanctity are dominant moral foundations. In this way, cross-cultural comparison in future research is desired.

Finally, in the present study, we mainly paid attention to television shows for preschoolers because preschool is an important developmental stage in which young children begin to build their overall foundational psyche and belief structures. They are vulnerable to a variety of external influences in this period, including media. Moreover, preschool television shows are more friendly for coding with relatively simple storylines and recognizable facial expressions. However, other developmental stages are also worth our attention. Therefore, the comparison between prosocial television shows for different age groups should be made in future research.

### *Conclusion*

By broadening the theology and methodology scope of past research, the current study employed MFT as a framework to examine the linkage between five moral foundations and a variety of emotions in prosocial TV programs. This work suggests that the care/harm, fairness/reciprocity and authority/respect are depicted more in western prosocial media for preschoolers. Moreover, positive emotions were portrayed more frequently than negative emotions. Given the role prosocially-oriented media could have in childhood socialization, the present study has shown what types of moral values and emotions that young children are often exposed to. These findings also add to a growing body of literature that reveals no support for exclusive relationships between emotions and moral domains. Therefore, continuing to examine the linkage between emotions and moral foundations is important for understanding the role of emotions in people's moral judgment/behavior.

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## APPENDIX

**Emotion Coding Manual** Grady et al.(2019).

**-Positive Emotions:** Happiness,Contentment, Surprises, Love Pride

**-Negative Emotions:** Anger, Dislike, Fear, Worry, Sadness, Frustration, Disgust, Contempt, Guilt

- **Happiness** was coded when faces depicted smiles and body posture was open (e.g., chest out and shoulders back).
- **Contentment** was coded when smiles were closed mouth, eyes were closed and arched in a U shape, and posture was relaxed.
- **Love** was coded when faces depicted a smile, the head was tilted, and body posture showed affection (e.g., hug).
- **Surprise** was coded when brows and eyelids were raised, mouths were round and open, and posture showed open hands and backward movement.
- **Pride** was coded when smiles were slight, chin was forward, and posture was upright and expanded (e.g., chest was out).
- **Anger** was coded when brows were furrowed, eyes were narrowed, mouth was open and yelling or pressed together, and posture showed movement forward, often with clenched fists, raised arms, or stamping feet.
- **Dislike** was coded when brows were furrowed, and lips were closed or tense; often hands were on hips.
- **Fear** was coded when eyebrows were up, mouths were pulled taunt, and posture indicated movement away or pulling back (e.g., crouching).
- **Worry** was coded when brows were furrowed, mouths were pulled taunt or frowning, and posture showed tenseness or nervousness (e.g., wringing hands).
- **Sadness** was coded when brows were oblique, gaze was downward, lip corners depicted frowning, and posture was drooped or crouched. (tears)
- **Frustration** was coded when eyebrows were oblique,gaze was downward, and lip is depicted frowning
- **Disgust** was coded when eyes were narrow, noses were wrinkled, upper lips were raised, mouths were open with tongue out, and body and head were pulled back.
- **Contempt** was coded when one lip corner was pulled up and eyes looked to the side.
- **Guilt** was coded when inner corners of the eyebrows are raised so that the eyebrows slant downwards from the center of the forehead, cheeks are slightly raised, lip corners are slightly pulled down, and sometimes the lower lip is pushed up slightly.

## Moral Foundations Theory Coding Manual

### Overview

**First**, moral behaviors are identified in every unit of analysis.

**Then**, the motivation is coded when the principal actor (PA) express a desire to uphold/violate moral principles associated with the following **main themes**:

**Care/Harm:** Is the principal actor (PA) displaying/withholding concern for a party in need?

**Fairness:** Is the PA talking about adherence to rules of honesty/giving people what they deserve?

**In group-Loyalty:** Is the PA talking to/about a group?

**Authority:** Is the PA talking to/about a source of legitimate power?

**Purity:** Is the PA displaying/advocating noble/superhuman/subhuman/animal-like behavior?

**Inclusion:** Is the PA interacting with people who are different from him/her?

**Operational Definition of Each Coding Category**

**Care:** compassion, empathy, or sympathy toward someone in need.

**Fairness:** favor toward equal distribution of rights and resources.

**Loyalty:** Preference for those in one's ingroup or against those in one's outgroup

**Authority:** Deference toward traditional power structure

**Purity:** Interest in maintaining a wholesome lifestyle free of social contamination

**Inclusion:** Be tolerant/inclusion of social differences.

Detailed descriptions of each motivation appear beginning on the next page.

## Care/Harm

**Main theme:** An entity responding to another in need.

**Operational Definition:** compassion, empathy, or sympathy toward someone in need.

- Pre-conditions:

- 1) Positive

- a) An **entity** (human/animal) alleviates a need of another at a cost to self:

- i) "Need" may be in the form of physical pain, emotional distress, lack of resources, decreased well-being

- 2) Negative

- b) An entity causes or ignores another entity's need:

- i) "Need" caused or ignored by the entity may be in the form of physical pain, emotional distress, lack of resources, decreased well-being

- o **Virtue:** Positive: Kindness/Compassion, Caring

- Negative: Harm, Indifference, Cruelty

- o **Representations**

### Positive Care

(1). **The Behavior Correlate of Kindness and Compassion:** the act of showing a deep awareness of and concern for another's the physical and emotional suffering

*Example: When watching others suffering, weep, cry*

*i). "Are you OK? Do you need any help?"*

*ii). "I know you are suffering, I feel your pain."*

(2). **The Behavior Correlate of Care/Nurturance/Gentleness:** the act of offering or providing physical and emotional assistance. This includes protecting and supporting others, physically and emotionally.

*Example: i). Listening to your friend when she is suffering*

*ii). Hugging your friend who was dumped*

*iii). Helping old women to cross the street.*

*iiii). Give help when others need it*

### Negative Care

(1). **The Behavior Correlate of Harm:** the act of causing another's physical or emotional pain, or planning to put another in jeopardy of physical or emotional pain;

*Example: i). Hit, beat, kick, etc*

*ii) "You are a loser/idiot!"*

(2). **The Behavior Correlate of Indifference:** the act of choosing not to assist another who is suffering physical or emotional pain;

*Example: i) When watching others getting hurt/suffering, walk away or choose not to help.*

*ii) Walk away and choose not to help when seeing an old woman crossing the street.*

*iii) "You're sad? Whatever, I'm busy."*

**(3) The Behavior Correlate of Cruelty:**the act of enjoying the pain or distress of others regardless of whether the pain/distress is functional or dysfunctional; or feeling no remorse towards the dysfunctional pain or distress of others.

Example: *i)When watching others suffering, laugh or show happiness in some other ways*

*ii) Two boys tortured the kitten for hours just for fun*

*iii) Sam laughs at Susan who cannot walk and is on a wheelchair*



## Fairness

**Main theme:** Equitable and justified distribution of truth, resources, and the law.

- Pre-conditions:
  - 1) Positive
    - a) The story portrays (or explicitly foreshadows) an entity (human/animal) advocating justice, equitable distribution of resources, or honesty at a cost to self.:
  - 2) Negative
    - b) An entity causes (or advocates for) injustice, unequal distribution of resources, or cheating/lying
- **Virtue:** Positive: Honesty, Distributive Justice (i.e., Equity, Egalitarianism)  
 Negative: Dishonesty, Distributive Injustice (i.e., Inequality/favoritism, inequity), Retributive Injustice
- **Representations:**

### Positive Fairness

**(1)The Behavior Correlate of Honesty:** The act of following an implicitly or explicitly stated, socially accepted agreement at personal cost (e.g., keeping a promise, following the rules, telling the truth...)/Honesty under pressure to lie

- Example: *i) Do not cheat in the exam;*  
*ii) Keep the promise*  
*iii) Reveal some true at personal cost*  
*iv) "I will never lie for money!"*

**2)Procedural justice:**The act of using a transparent, societally accepted rule-based procedure of decision making (e.g., the legal system, or agreed upon mediator) to resolve conflict.

- a)Seeing a man making a plea in court
- b)"Let the judge pass judgment!"
- c)Decisions based on legal procedures

**(3) The Behavior Correlate of Distributive justice:** Fairness in the distribution of rights or resources

- a) **Equity:** Acting in a manner such that the benefits people receive is proportional to their contribution.

- Example: *i) Everybody gets their fair share*  
*ii) The boss rewards hardworking employees*  
*iii) Tit for Tat*

- b) **Egalitarianism:** Favoring equality for all people (i.e., all people should be treated the same).

Example:*i) Athletes shouldn't try to gain an unfair advantage with*

- performance enhancing drugs*
- ii) *Everyone should have an equal opportunity to succeed!*
- iii) *The teacher didn't favor one student over another.*

4) **Retributive justice:** The act of punishing a wrongdoer at a level that is accepted by the society as proportionate to the wrongdoing.

- i). This criminal who killed a girl deserves a severe penalty.
- ii). The boy who broke the window had to pay for it.
- iii) "An eye for an eye, tooth for a tooth."
- iv). The child who got caught smoking cigarettes was grounded.

### Negative Fairness

**(1) The Behavior Correlate of Dishonesty:** The act of violating an implicitly or explicitly stated, socially accepted agreement (e.g., telling a lie...)

- Example: i) *Sam cheats in the exam because he wants good grades*
- ii) *Break the promise/lie*
- iii) *Susan called in sick even though she felt fine.*

**(2) The Behavior Correlate of Distributive Injustice:** Unfairness in the distribution of rights or resources for someone else. If you benefit from it, it cannot be a fairness violation.

**a) Inequality/favoritism:** acting in a manner such that the benefits provided meet some individual or group's needs more than another individual or group's needs.

- Example: i) *"The bouncer let the pretty people go to the front of the line even though the rest of us had been waiting for hours."*

**b) Inequity:** acting in a manner such that the benefits people receive are not proportional to their contribution.

- Example: i) *Sam gets two cookies while Eric gets one for helping their mother cleaning the room.*

**(3) The Behavior Correlate of Retributive Injustice:** the act of punishing a wrongdoer at a level that is unacceptable (too much or too little) by the society standards as commensurate to the wrongdoing

- Example: i) *The boy ate ice cream against his father's wishes and was beaten severely.*

## Ingroup Loyalty

**Main theme:** It's us against them!

- Pre-conditions:
  - 1) Positive
    - a). The story portrays (or explicitly foreshadows) an entity (human/animal) standing with his/her group, juxtaposing his/her ingroup versus **some outgroup**, at a cost to self.
  - 2) Negative
    - b). An entity (human/animal) betrays his/her ingroup by quitting and/or joining another outgroup

o **Virtue:** Positive: Solidarity, Martyrdom, Bigotry

Negative: Departure, Betrayal

o **Representation:**

### Positive Loyalty

**(1). The Behavior Correlate of Solidarity:** Standing together with a group at a cost to self in order to show cohesiveness/harmony towards a specific group (e.g., nation, team, gender, race, class, etc.);

- a) Following and supporting your group's decision (even if it is in conflict with other goals).
- b) Seeking societal harmony while risking personal well-being.
 

Example: *i) "One for all and all for one!"*
- c) Singing a school fight song/national anthem in the midst of another group.
- d) Wearing clothes that show the logo or colors of your group in enemy territory
- e) Verbally defending or getting angry at attacks on your group.

**(2). The Behavior Correlate of Martyrdom:** An individual act of sacrificing the self for the group;

- Example: *i) The policeman was injured when saving public goods.*  
*ii) Fighting your families' battles.*

**(3). The Behavior Correlate of Bigotry:** suspiciousness or bias against outgroup

- a) Verbally, physically, or symbolically attacking outgroup members because they are outgroup members

Example: *i). Mary from School A. She claims that the gym in School B is worse than School A even though most people think they are similar.*

### Negative loyalty

**(1) The Behavior Correlate of Departure:** giving up ingroup membership when the ingroup still wants the entity there

*Example: i) The basketball player quit his team*

**(2) The Behavior Correlate of Betrayal:** behaviors that sacrifice or have the potential to sacrifice ingroup interests for the self or other groups' benefits;

*Example: i) The lead singer left the band behind when he was offered a contract to be a solo performer.*

### **Inclusion/Exclusion**

**Main theme:** An entity encouraging people to include people different from them (outgroup members).

Pre-conditions:

1) Positive: **include** out-group members in their group/tolerant attitudes to people outside the group (of social differences)

- a) Ian is in a wheelchair. Cleo asks Ian to join his group and play together with him and his friends even though Ian is different from other children.
- b) You treat Sam, who is in a wheelchair, as the same as the rest of your classmates.

2) Negative: an entity shows a greater favorability towards inter-group members/exclude **outgroup members**/ intolerant attitudes to people outside the groups( of social differences)

- a) Ian is in a wheelchair. Sam doesn't want to play with Ian because Ian is different from the other children.

## Authority

**It appear in children’s media when a character obeys or disobeys parents or a teacher  
(when they responds to an authoritative figure)**

Main theme: An entity responding to a benevolent/good authority figure

Pre-conditions:

1) **Positive** a) The story portrays (or explicitly foreshadows) a subordinate entity (human/animal) respecting the wishes of another, hierarchical and benevolent (good) entity (human/animal, organization, or tradition) at a cost to self.

2) **Negative** a) An entity (human or animal) disrespecting the wishes of another, hierarchical and benevolent (good) entity (human, animal, organization, or tradition) at a cost to self.

o **Virtue:** Positive: Obedience/Deference, Traditionalism.

Negative: Disobedience, Defiance, Progressivism

o **Representations:**

**Positive Authority**

**1) The Behavior Correlate of Obedience/Deference:** acts showing respect for the legitimate power of a leader or any group or institution to which the person belongs (political, religious, social, business, educational, etc.);

(a). An authority figure asks a person/group to do something and the person/group immediately responds “yes, I will,” or immediately and unquestionably does what they were told. **In children’s media: it happens when a character obeys a teacher or parent**

Example: *i). Follow what your teacher asked you to do in the class*

*ii). Follow what your parents/grandparents asked you to do at home.*

**2)The Behavior Correlate of Traditionalism:** acts showing respect for traditional customs and social norms of any group or institution to which the person belongs.

Example: *i) Chinese will make and eat the moon cake with the whole family during the mid-autumn festival*

*ii ) The Jewish man covered his head when he entered the temple.*

**Negative Authority**

**1) The Behavior Correlate of Disobedience:** Acts showing disrespect for the legitimate power of any group or institution to which the person belongs (political, religious, social, business, educational, etc.);

Example: *i) Question, criticize or challenge religious beliefs.*

*ii) students reject to go to class against the school*

**2) The Behavior Correlate of Defiance:** Acts showing disrespect for the leaders of any group or institution to which the person belongs;

Example: *i) Question, criticize or challenge the president*

*ii) People protest against the mayor*

**3) The Behavior Correlate of Defiance of Progressivism:** acts showing disrespect for traditional customs and social norms of any group or institution to which the person belongs.

**Example:** *i) "We should abandon the rules of this school"*

*ii) "We should cancel traditions of having midterm exams in this school"*

## Purity

**It rarely shows in children's media, but appears sometimes when someone is violating purity by consuming an excess amount of something or generally being uncouth.**

**Main theme:** An entity desiring/ignoring sacredness and decontamination.

Pre-conditions:

1) Positive

a) The story portrays (or explicitly foreshadows) an entity (human/animal) desiring to live the type of sacred, honorable, god-like lifestyle that leads to social betterment or avoiding contamination (social, spiritual, or biological) at a cost to self.

2) Negative

a) An entity (human/animal) is unable to control his/her basal impulses and may be boorish, uncouth, or disgusting.

o **Virtue:** Positive: Relating to sacredness, Temperance

Negative: Relating to sacrilege,

o **Representation:**

**Positive Purity**

(1) **The Behavior Correlate of Relating to sacredness:** Uphold a sacred belief (accepted without question)

a) The girl believed that going to church every Sunday was necessary to show her faith to God.

(2) **The Behavior Correlate of Temperance:** Demonstrate temperance in the pursuit of hedonistic pleasure or other basal impulses.

a) Although he thought sex was fun, the boy decided to follow his faith and wait to lose his virginity until he was married.

b) "Although I'd love to binge on cookies, ice cream, and cake, I want to live a healthier lifestyle to be a better person. Clean eating is the way to do this."

(3) **The Behavior Correlate of God-like:** Said to be similar to the actions of a god or some other spiritual superhuman species.

*Example: i) "They go on a pilgrimage every ten years."*

**Negative purity**

(1) **The Behavior Correlate of Relating to sacrilege:** Violate a sacred belief

(2) **The Behavior Correlate of Excess:** Demonstrate the excessive pursuit of hedonistic pleasure: Lust, wrath, greed, gluttony, sloth, envy, pride

a) Lazy/greedy/promiscuous behavior

(3) **The Behavior Correlate Animal-like:**

a) Said to be similar to the actions of an animal or some other subhuman species



b) Identified as interacting with an animal or some other subhuman species

*Example: i) He eats like a pig*

*ii) Your room is like a pig pen!"*

## Ms. Wenyu “Dora” Wang

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### Education

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**Wake Forest University**, Winston-Salem, NC Dec 2021

Master of Arts in Communication

Advisor: Marina B. Krcmar, Ph.D

**St. Olaf College**: Northfield, MN May 2018

Bachelor of Arts in Psychology and Mathematics

Advisor: Dana Gross, Ph.D

### Research Experience

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**St. Olaf College, Emo Dev/Media in Different Cultures** *Researcher*

**May-August 2018**

- **Description:** I conducted independent research on the difference between culturally appropriate emotion norms reflected in American and Chinese children’s TV shows in order to better understand cultural differences in the socialization of emotions, which are associated with children’s social/emotional competence and emotional-regulation.

**SOC Emotion, Dev Gene & Environment** *Researcher*

**February-May 2017**

- **Description:** I reviewed the research literature about different gene and environment models to examine the combination of genetic and environmental impact on children’s general developmental, especially social emotional development, and the development of future social emotional learning programs in schools.
- Presented at Minnesota Undergraduate Psychology Conference

### Academic Presentations

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Wang, W. (April, 2017). *Gene and Environment Interaction for Children’s Social and Emotional Development*. Poster presented at the Minnesota Undergraduate Psychology Conference. St. Olaf College, Northfield, MN.

Caushaj, A., McIlroy, C., Wang, W. & Nguyen, K.,(April, 2017). *The Effects of Bilingualism on Cognitive Abilities*. Poster presented at the Minnesota Undergraduate Psychology Conference. St. Olaf College, Northfield, MN.

Dr. Cho, G.E., Johnson, J., Wang, W., & Xiong, T. (2017). *Preschool Skills Assessment of Eight Developmental Domains*. Unpublished Final Report for Hand-in-Hand Preschool, Northfield Public Schools, Northfield, MN.

## Internship Experience

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**Northfield Area Family YMCA, MN**

*Intelligence Assistance for Psychology Site*

*Project–Winter Intern*

**January 2017**

- Summarized responses from Northfield students in the Minnesota State Student Survey
- Mainly Measured the average sleep hours of elementary and middle school students in a survey and its impact on local students' academic performance.
- Recommended improvements and interventions to fulfill local students' unmet needs based on their feedback

**Ipsos, Shanghai, China**

*Research Assistant*

**May-August 2018**

- Participated in a marketing research project on customers' preference on the commercial campaigns of two flower brands
- Designed a survey to collect data from customers; analyzed data based on sampling distribution, and sketched data visualization graphs

**Hunan Broadcasting System (HBS), China**

*Event Intern*

**February-May 2019**

- Supported planning and preparation for the opening ceremony for *The First China-Africa Economic and Trade Expo-2019* held in Hunan Province; revised visual advertisements using Photoshop

## Volunteerism

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**International Coordination Center for Volunteer Teacher (ICCVTT), Sakeao Province, Thailand**

*Volunteer Teacher (K-6<sup>th</sup>)*

**December 2018 – February 2019**

- Taught Chinese culture and language

**Psychological Aid, Laura Baker Service Association, Northfield, MN**

*Volunteer*

**March 2016 – March 2017**

- Provided psychological aid to children and teenagers with developmental disabilities

**St. Olaf College, Ole Spring Relief, Boulder, Colorado**

*Volunteer*

**March 2016**

- Instructed survivors to talk about their experience in the natural disaster, and helped them relieve their mental trauma; supported the community in service projects

## Teaching Experience

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**St. Olaf College, Academic Support Center, *Academic Tutor (Psychology & Math)***

**2015-2017**

- A weekly tutoring session with students to teach calculus II and intro psychology; utilized strategies for helping students learn and stay motivated; students had learning disabilities or different cultural backgrounds

## Extracurricular Activities

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### Asian Conversation, Japan and China, Department of Asian Studies, St. Olaf College

#### *Participant*

April 2015 – February 2016

- Discussed historic and contemporary narratives of Asian travelers, pilgrim, and migrants  
Traveled to China and Japan for an ethnographic study through observation, site visits, and interviews

### Awards and Scholarship

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Partial Tuition Scholarship, Wake Forest University	2020-2021
Partial Tuition Scholarship, Wake Forest University	2019-2020
Top Third Team, Mathematical Association of America North-Central Section Team Competition	2017
International Student Grant and Student Employment Grant, St. Olaf College	2015-2018

### Skills

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#### Relevant Computer Software or Technology

Skilled in R & SSPS

#### Other Skills

Piano (learned for more than 12 years); Adept in Chinese Calligraphy