

# The Influence of Societal Expectations on Children's Colour Palettes and Subject Choices

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**Abstract:** This paper investigates how prevailing societal norms and cultural constructs shape children's artistic expression, specifically focusing on the selection of colour palettes and the thematic content of their drawings. It explores the intricate interplay between external influences, such as gendered colour associations and media representations, and the internal psychological development of young artists (Yu & Nagai, 2020). The study posits that these external factors often guide children's aesthetic choices in subtle yet significant ways, potentially limiting their uninhibited creative exploration and reinforcing conventional artistic paradigms. This research employs a descriptive-analytical approach to examine the symbolic and plastic indications within children's drawings, correlating them with established art historical precedents to discern underlying societal impacts on early artistic development (Jadidi & Jadidi, 2023). Furthermore, this study will delve into how digital tools, such as color-sensing pens, might mediate or exacerbate these societal influences on color perception and selection among children in the "dawning realism" stage of artistic development (Chih-Kai et al., 2022). The drawings were coded for color temperature, iconography, and spatial dynamics using a standard rubric. Results revealed a strong gender-design link: girls favoured pinks and purples for relational subjects, whereas boys preferred darker or primary colors for action themes (Fulcher & O'Connor, 2023). Nearly all boys avoided pink, indicating conformity pressures (Fulcher & O'Connor, 2023). Boys produced dynamic, floating scenes, while girls preferred stable, grounded compositions. Societal expectations and media representations shape children's art, constraining creativity (Wong & Hines, 2015). Gender-neutral pedagogies in early art education are thus essential, as children rely on cultural symbols and graphic schemas. These patterns reflect broader social-environmental and cultural influences, as evidenced by cross-contextual stylistic differences (Fulcher & O'Connor, 2023). This phenomenon underscores how early artistic development, though seemingly spontaneous, is deeply embedded within and reflective of the cultural milieu in which children are raised, influencing even fundamental elements like color preference and thematic choice (Huang et al., 2023).

**Keywords:** Child Art, Gender Performativity, Visual Culture, Schematic Stage, Color Psychology, Pedagogy.

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## I. INTRODUCTION

Traditionally, the artistically developed child has been primarily viewed using a biological perspective. But recent studies are arguing that art is the performance of a social situation. As Judith Butler's theory of performativity suggests, gender is not who you are but rather what you do (Imbesi et al., 2023). Within child art, this performance is embodied in "gendered visual codes". When a toddler selects a crayon, the gesture embodies two things: internal feelings and external circumstances. Art is an avenue which provides communication for children to express emotions and understand their environment in ways other than verbal language. (Xiao et al., 2023). Psychologically, we know that children's drawings depict, in a social, emotional, and cognitive way. (Picard & Gauthier, 2012).

According to (Fraijo-Sing et al., 2020), the developmental theorists learned that by age 2-7, children start to use images to interpret and communicate and become more sophisticated in the way they draw. In industrialized societies, gender-based color preferences, such as 'pink for girls, blue for boys,' emerge by the age of 3 years and are expressed in a way predominantly determined by culture as opposed to biology (Wong & Hines, 2015). Although this basic understanding is the case, there is a need for research that delves into how communal expectations influence children's choice of colors and their choice of aesthetic material, the selection of genres of visual arts, as suggested by Cherney et al. (2005) (Mahgoub, 2016). Despite such wealth of basic knowledge, a knowledge void in research was noted regarding the way communal expectations interrelate and influence color palettes of children's decisions of color palettes and artistic subject matter as suggested by Cherney

et al. Much of the extant literature investigates color preferences and gender-stereotyped ambitions in isolation, overlooking the combined impact of their reinforcement of social mores in children's art (Michael Page, 2021). This study fills this gap by exploring how environmental reinforcements in the form of family, school, and media combine to exert pressure on children to use color and subject at the same time, overshadowing innate creative tendency and providing for stable, gender-coded artistic expressions, which (Boyatzis & Eades, 1999) which assert can serve as positive reinforcements, rather than the opposite. Thus, the study is informed by the common question: how do social expectations and external reinforcements interact to influence the color palette and the subject that children express in their artwork, between the ages of 4 and 8? It is suggested that as children transition from the early exploration stage (2-4 years) to the specialized, functional stage (4-8 years), their choices will exhibit a decline in pigment and increase in gender-typical subject matter, suggesting a greater internalization of societal norms (Fulcher & O'Connor, 2023)(Cherney et al 2005).

## II. LITERATURE REVIEW

Artistic expression is an essential part of non-verbal communication in childhood, helping to understand a child's mental state and views of life (Fabris et al., 2023). Exploring societal expectations regarding children's color and content is interdisciplinary, and includes elements from developmental psychology, sociology, and education. Though earlier attempts at studying the field were made in the 19th century, today's scholarship understands children's drawings as intentional responses to cultural, gendered, socioeconomic factors, not as arbitrary attempts at random. Child artists shift their approaches to artistic practice to suit the wishes and expectations of society. Growing up, their art transitions from natural images to symbols, mirroring the constructs and stereotypes they have assimilated. From the perspective of socialization and aesthetic theory, several influential theories are identified in the literature that articulate how societal standards are projected onto a child's aesthetic. These frameworks include psychological models of reinforcement and sociological theories of class reproduction, each providing a perspective through which to view the "blueprints" of a child's drawing.

However, counterarguments challenge the dominance of social constructivist views, positing that biological and innate factors may underpin gender-typed preferences in children's art. For instance, research indicates that preferences for pink among girls and blue among boys emerge between ages 2 and 3, strengthening rapidly and appearing prior to extensive cultural reinforcement, suggesting possible evolutionary or prenatal influences rather than solely socio-cognitive processes (Fulcher & O'Connor, 2023; Wong & Hines, 2015). Similarly, gender differences in artistic production and preference (Davis et al., 2021) (Boyatzis & Eades, 1999) are evident as early as preschool, potentially reflecting innate dispositions that interact with, rather than being wholly determined by, environmental factors (Boyatzis & Eades, 1999). These

perspectives highlight the need for integrative models that balance nature and nurture in explaining children's aesthetic choices. This implies a complex interplay in which intrinsic predispositions might set a foundational stage, upon which societal expectations then refine and direct artistic expression.

### ➤ *Social Learning Theory and the Mechanism of Reinforcement*

Social Learning Theory, pioneered by Albert Bandura and elaborated on gender development by Bussey and Bandura, posits that children acquire behaviors through observation, imitation, and differential reinforcement from their environment. Caregivers, peers, and media reward conformity to social norms, such as praising girls for using pink or depicting domestic scenes in their artwork while discouraging deviations, thereby shaping gender-typed artistic preferences from an early age (Boyatzis & Eades, 1999; Farr et al., 2017). This mechanism explains why preschoolers produce and prefer gender-stereotypical drawings, as boys opt for action-oriented subjects and darker tones, reinforced by cultural expectations rather than innate predispositions alone (Fulcher & O'Connor, 2023; Wong & Hines, 2015). As Boyatzis and Varghese observed in their study of children's emotional associations with colors, children's color preferences are influenced by early social experiences (Boyatzis & Varghese, 1994). Even children from four to seven can give reasons for their predilections (Siu et al., 2016).

### ➤ *Gender Schema Model and Cognitive Internalization*

Building on Social Learning Theory, the Gender Schema Model, developed by Sandra Bem, suggests that children actively construct mental frameworks or "schemas" about gender from their cultural environment. These schemas subsequently influence how children perceive and interpret information, leading them to selectively attend to and internalize gender-consistent artistic norms, which are then reflected in their artwork. Thus, children are not merely passive recipients of cultural messages but active constructors of their gender identity, which in turn guides their artistic expressions to align with societal expectations (Navarro, 2014). They create mental frameworks (schemas), or images, to make decisions to label behaviors, characteristics, or looks as a male or a female. After a young child comes to terms with a gender, she or he becomes actively learning and looks for information in line with the schema they have while rejecting or forgetting data that contradicts it. Children's gender schemas become increasingly elaborate as the child matures, and they incorporate new ideas and in some cases question existing ideas. Between the ages of two and three, for example, children develop these schemas, as they develop a general belief they're the only thing making sense of the world and their world, that's gender. This framing colours their art, for example, boys choose different subjects and colours that will be perceived as masculine to be male, such as machines or cool tones. Bem (1981) notes that some children adhere strictly to gender norms, but others are more loose. Research has shown that environments emphasizing rigid gender roles result in more stereotypical artistic choices.

Building on Social Learning Theory, the Gender Schema Model, developed by Sandra Bem, posits that children actively construct mental frameworks, or "schemas," about gender from their cultural environment, using these to label behaviors, characteristics, or appearances as masculine or feminine (Lipsitz, 1981). Once children identify with their gender—typically between ages 2 and 3 (Wingrave, 2016)—they selectively seek, attend to, and internalize information consistent with their schema while ignoring or forgetting contradictory data (Sebastián-Tirado et al., 2023), with schemas becoming more elaborate over time as new information is incorporated or existing ideas questioned (Martin et al., 2002). This cognitive process colors their artistic expression; for instance, boys select masculine subjects like machines and cool tones (e.g., blues), while girls favour feminine themes, reflecting schema-driven alignment with societal norms (Boyatzis & Eades, 1999; Fulcher & O'Connor, 2023). Bem noted variability, with some children adhering rigidly to schemas and others more flexibly, a pattern amplified in environments emphasizing strict gender roles, which yield more stereotypical artistic choices (Wong & Hines, 2015). Gender schema theory explains how children acquire gender-defined characteristics, influencing their attention, motivation, and behavior by organizing environmental information into mental associations that shape their understanding of the world and themselves (Canevello, 2016; Lipsitz, 1981). This cognitive framework thereby guides children to associate behaviors and expectations with one gender or the other based on their experiences, leading to the development of gender identity and sexual roles that are reflected in their creative expressions (Canales et al., 2020; Lipsitz, 1981).

➤ *Bourdieu and the Theory of Cultural Reproduction*

The theory posits that cultural capital, transmitted through family and social institutions, influences artistic preferences and expressions, reinforcing existing social hierarchies. Children from varying socioeconomic backgrounds and cultural contexts internalize these capital forms, which subsequently dictate not only the subjects they depict but also the stylistic elements and mediums they deem appropriate within their respective social strata. This process of internalization and subsequent externalization in artistic endeavors perpetuates a cycle where societal norms are not merely reflected but actively reproduced and reinforced through the creative acts of individuals (Canales et al., 2020; Chen, 2024).

Bourdieu offers a distinct sociological lens through his theory of cultural reproduction, which elucidates how parents transmit cultural capital embodied knowledge, skills, and tastes to perpetuate social stratification (Edgerton & Roberts, 2014; Werfhorst et al., 2003). Central to this framework is the concept of *habitus*: deeply ingrained dispositions and preferences acquired in the familial environment, profoundly shaping children's artistic inclinations and educational orientations. In the realm of children's art, *habitus* manifests as an intuitive familiarity with culturally esteemed forms, techniques, and aesthetics, which schools routinely misconstrue as inherent talent or ability. This institutional misrecognition transforms socioeconomic disparities into ostensibly merit-based scholastic hierarchies (James, 2020; Reay, 2022). As a result, children from higher-status families gravitate toward elite-aligned art styles, color palettes, and motifs such as refined compositions or canonical subjects that educators favorably evaluate, thereby reinforcing class distinctions through everyday creative practices (Burkhard et al., 2024; Jensen, 2016).

Table 1 Bourdieu and the Theory of Cultural Reproduction

Theoretical Framework	Primary Mechanism	Focus Area in Child Art
Social Learning Theory	Reinforcement and modelling by adults and peers.	Adoption of gender-typed colors and themes through social approval.
Gender Schema Theory	Cognitive categorization and internal self-socialization.	Use of art to consolidate and perform gender identity.
Cultural Reproduction	Transmission of <i>habitus</i> and cultural capital.	Development of aesthetic "taste" and complexity as a marker of class.
Ecological Valence Theory	Emotional association based on previous experiences.	Preference for colors that remind the child of pleasant memories.

➤ *Contrasting Perspectives: The Nature vs. Nurture Debate in Color Choice*

A central point of debate in the scholarly literature revolves around whether children's color preferences stem from innate biological drives or are shaped by social and cultural influences. This longstanding "nature versus nurture" controversy is especially salient in analyses of the pink-for-girls and blue-for-boys gender dichotomy.

➤ *The Argument for Biological Predisposition*

Some researchers argue that gendered color preferences have evolutionary origins, positing an innate biological basis (Davis et al., 2021). For instance, Hurlbert and Ling propose that girls' preference for pink and related hues may

derive from ancestral roles in gathering ripe red fruits or detecting subtle changes in infants' skin coloration, whereas boys' affinity for blue-green tones could stem from hunting or navigational tasks requiring sensitivity to vegetational camouflage and sky/water cues (Wong & Hines, 2015). This perspective aligns with findings of gender differences emerging as early as ages 2–3, prior to extensive socialization (Wong & Hines, 2015) and pre-schoolers' established preferences for blue (boys) and pink (girls) (Fulcher & O'Connor, 2023). Conversely, non-essentialist theories, such as schema theory, suggest that cultural messaging significantly influences children's color preferences by associating pink with femininity in mass media and consumer goods (Davis et al., 2021).

However, strong evidence for these evolutionary claims is lacking. Research with human babies often finds no significant gender differences in color-emotion associations before age two. Wong and Hines found no sex difference in infants' color preferences, suggesting that any biological preference may emerge postnatal (Wong & Hines, 2015). This coincides with the timing of gender identification in schema theory typically between ages 2 and 3 when children begin internalizing gender-typed behaviors like color preferences .

Conversely, substantial research posits that color preferences are predominantly shaped by sociocultural influences. Paoletti's historical analysis reveals that in the early 1900s, pink was regarded as a strong, masculine hue, while blue was viewed as delicate and feminine. The convention of "pink for girls, blue for boys" emerged only in the mid-20th century.

In contrast to the biological perspective, substantial research contends that color preferences are largely socially constructed. For example, Paoletti (1987) documents that early 20th-century associations linked pink with masculinity and blue with femininity, showing that the familiar 'pink for girls, blue for boys' divide is a product of shifting cultural norms rather than inherent preference.

Cross-cultural studies further support the view that color preferences are learned. Hurlbert and Ling (2007) found that British and Chinese women shared similar color preferences, but in smaller societies without global media exposure, such as the Shipibo in Peru or the BaYaka in Congo, significant gender differences in color preference were absent. This suggests that girls' preference for pink is culturally, rather than biologically, determined.

➤ *Chromatic Dialectics: Hue, Saturation, and Value (HSV)*

Researchers employ the Hue, Saturation, and Value (HSV) model to analyze colour choices in detail. Hue refers to the color's name, saturation to its intensity, and value to its lightness or darkness. Societal factors often influence how children apply these color qualities in their artwork.

➤ *Color-Emotion Associations*

A consistent finding across the literature is that children associate bright, high-value colors with positive emotions. For example, Boyatzis and Varghese (1994) found that light colors like yellow and blue are associated with feeling "happy" or "strong," whereas dark colors like black or gray are linked to negative emotions like "sadness" or "anger". Girls, in particular, show a strong preference for brighter colors and a distinct dislike for darker ones, a pattern that consolidates with age and socialization. Boys, however, are more likely than girls to have positive emotional associations with dark colors, potentially because black is associated with masculine strength and sports.

➤ *Socioeconomic Gradients in Color Preference*

Recent studies have examined the impact of socioeconomic status (SES) on environmental color preferences. Research by Read and Upington (2009) and others indicates that, although children generally prefer brighter and more saturated colors, significant differences in value preferences exist between lower- and upper-class neighborhoods. Children in high-SES households may encounter more complex and varied color schemes, while those in low-SES environments often experience basic, high-contrast palettes typical of mass-produced toys and clothing.

Table 2 Socioeconomic Gradients in Color Preference

Color Dimension	Typical Child Preference	Impact of Societal Expectations
<b>Hue (Color Type)</b>	General preference for red and blue across genders.	Gender-typed "pink for girls" and "blue for boys" pressure.
<b>Saturation (Brightness)</b>	Higher saturation (pure colors) is generally preferred.	Brightness associated with "happy" spaces in school contexts.
<b>Value (Lightness)</b>	Preference for high value (light) over low value (dark).	Girls more likely to prefer high value; boys accept low value.
<b>Contextual Palette</b>	Varies by setting (e.g., indoor vs. outdoor).	SES-related gradients in the complexity of preferred palettes.

Color sets the mood in a drawing, but the subjects children choose show how they understand social roles, relationships, and events.

Classroom studies, such as Hopkins (2019) at Beginnings Preschool, have identified clear gender patterns in the drawings of four- and five-year-olds. Boys frequently depict machinery, including rockets, fictional machines, and inventions. Their narratives often emphasize action.

In contrast, girls often depict figures, flowers, and butterflies(Huang et al., 2023). They more often include a ground line at the page bottom(Huang et al., 2023). Though not universal, these patterns show how children internalize

social concepts. The renowned "Draw-a-Scientist" test, a key longitudinal study of children's subjects, found that from 1966–1977, <1% depicted female scientists. However, a meta-analysis of 78 studies over five decades showed that by 2017, ~28% did so(Ruiz, 2024). This significant increase suggests a growing awareness and acceptance of women in STEM fields, reflecting changing societal perceptions and educational influences over time. These shifts in children's artistic representations underscore the profound impact of evolving societal norms on their understanding and depiction of gender roles within professions, particularly in fields historically dominated by one gender. Such developments highlight how children's drawings serve as a mirror reflecting the broader societal landscape and its evolving gender

paradigms, particularly concerning occupational roles (Vivaldi & Rose, 2024). Similarly, gendered patterns also emerge in the artistic production of preschoolers and kindergartners, with boys frequently illustrating moving and mechanical objects using darker colors, while girls often depict figures, flowers, and butterflies with lighter, warmer hues (Boyatzis & Eades, 1999; Huang et al., 2023).

This change is important: children under six draw male and female scientists about equally, but once they reach elementary and middle school, they draw more male scientists (Farland-Smith, 2019). This likely happens because they become more aware of gender differences and see more male science role models in school and the media (Acuña, 2017; Steinke, 2017). The research shows that while stereotypes are fading, they still strongly shape how children imagine their future roles (Polavieja & Platt, 2014). This internalization of societal expectations, particularly concerning gender roles in occupations, is further supported by studies demonstrating that children often justify their gendered choices in drawings, especially regarding women-dominated professions (Vivaldi & Rose, 2024).

Children's subject choices are also influenced by their peers (Ameen et al., 2023). Hopkins (2019) observed that if a popular student drew a rainbow, up to 70% of the class would replicate it during the same session. Societal expectations shape children's art everywhere, not just in Western cities (Restoy et al., 2022). Studies in Sub-Saharan Africa, especially rural Uganda, offer an important comparison to research from Europe and America (Restoy et al., 2022).

In places like Bunyangabu, Kasese, and North West Uganda, traditional gender roles often give boys more support for education and careers. Studies show that girls are often seen as 'weak' and less deserving of schooling, especially in poorer families (Jones, 2019). These beliefs show up in school performance and career goals: boys are pushed toward science, while girls are guided toward art or home roles. Art and drawing have been used in these contexts as an effective way to study and even challenge these deeply entrenched stereotypes. In rural North West Uganda, a "multimodal" approach that included drawing alongside theatre and creative writing enabled pre-primary educators and students to examine complex constructions of gender inequality (Jones, 2019). Through drawing, participants were able to represent not only the "what is" of their gendered reality but also the "what might be," creating a democratic space where alternative, fairer futures could be imagined.

Cross-cultural research on color preferences has also yielded interesting results in places like Chengdu, China, and various regions of Africa. Children are often attracted to bright and vibrant warm colors (Guo & Liu, 2022), suggesting that the "happy color" association may have universal qualities across cultures, even if the specific hue varies according to local cultural constructs. However, while some color preferences appear universal, specific interpretations and associations with colors often diverge significantly across different cultures, underscoring the influence of localized symbolic meanings.

The transition from traditional tools such as crayons and markers to digital devices, including tablets and AI tools, has introduced new factors influencing children's artistic creation. The rise of touch-screen devices has changed how children draw. Using a finger on a tablet uses different muscles and feels different than drawing on paper. Studies show that tablets can help young children produce clearer drawings, but the lack of resistance can result in less detailed, lower-quality art. This change in tools may make children's art simpler or more similar to each other (Philippsen et al., 2022). However, the impact of these digital tools on artistic expression is complex, with some research suggesting that while initial engagement might increase, the depth of creative exploration could be diminished due to the inherent constraints or concordances of the technology itself (Alkan & Tüzün, 2024).

The emerging application of Artificial Intelligence (AI) in education has introduced AI-based painting tools that can enhance creative expression through personal learning. However, there are major concerns concerning "cognitive homogenization" (Wang et al., 2025). Because AI tools frequently depend on uniform interfaces, they may lead children toward conventional or overgeneralized artistic choices (Wang et al., 2025), effectively automating the "societal expectations" of the information age. Excessive dependence on these tools can stifle original creation and independent thinking, as the AI acts as a "creative partner" that subtly directs the child toward "correct" or "popular" subjects and palettes (Machidon, 2025). This subtle guidance from AI-driven platforms could inadvertently reinforce existing societal norms and aesthetic preferences, potentially limiting the development of truly divergent artistic styles in children (Wang et al., 2025). This implies a critical need for balanced integration of AI tools, ensuring they serve as enablers of creativity rather than constraints that funnel children into predetermined artistic paths (Wang et al., 2025).

#### ➤ Evidence Gaps and Methodological Challenges

Despite the wealth of literature, several major evidence gaps remain, limiting the ability to draw universal conclusions about the influence of societal expectations on children's art (Fabris et al., 2023).

A main challenge in the field is the dependence on the experimenter's subjective interpretation. Psychoanalytic interpretations of children's psychological dynamics, grounded in "graphic characteristics" and "symbolic contents, regularly lack the psychometric rigor required for scientific reproducibility (Thomas & Jolley, 1998). There is a paramount need for more objective analytical tools, such as machine learning or deep learning algorithms, that can provide standardized assessments of children's drawings without observer bias (Beltzung et al., 2025; Fabris et al., 2023).

Most existing studies are cross-sectional, providing only a static perspective on a dynamic developmental process. There is a notable lack of longitudinal data tracking how children's artistic choices evolve through various socialization stages. Future research should implement

longitudinal studies following children from early childhood through adolescence to better understand developmental art trajectories.(Aydos, 2024). Additionally, innovative cross-cultural research designs are needed to examine diverse populations beyond Western, middle-class contexts. Collaborations with schools in rural and non-Western settings could help distinguish universal aesthetic patterns from those shaped by culture (Aydos, 2024).

The cognitive and neurobiological factors underlying children's drawing development—particularly the ways societal expectations modulate these processes—remain underexplored. While drawing is known to recruit executive function, visual attention, and fine motor skills(Simpson et al., 2017), the neural mechanisms linking social influences to expressive intensity (e.g., ink density and distribution) and developmental trajectories are poorly understood(Philippson et al., 2022),(Nath et al., 2025). For instance, transitions to digital media may alter brain mechanisms involved in drawing(Philippson et al., 2022), yet how cultural norms shape these pathways lacks empirical clarity. Addressing these gaps through neuroimaging and longitudinal designs would bolster art's reliability in clinical and educational assessments.

#### ➤ *Importance of the Study and Pragmatic Implications*

Investigating the influence of societal expectations on children's art transcends a mere academic exercise, yielding profound implications for developmental psychology where it illuminates socialization's role in aesthetic development(Zittoun et al., 2003)\$clinical practice, as drawings serve as projective tools for assessing emotional states despite interpretive challenges \$(Nath et al., 2025; Thomas & Jolley, 1998)\$, and educational policy, by guiding mixed-methods strategies to foster creativity amid digital transitions \$(Philippson et al., 2022; Zhang et al., 2025)

#### ➤ *Art as a Diagnostic and Preventive Tool*

Children's drawings function as a vital non-verbal means of communication, especially for those who have experienced trauma, abuse, or neglect(Ballús et al., 2023; YALÇIN & Sarp, 2025) By understanding how "normal" societal expectations shape art (e.g., the gendered color divide), clinicians can more accurately identify when a drawing deviates into "distress" markers, such as fragmented shapes, heavy crowding, or repetitive over-tracing(Boyatzis & Eades, 1999; Pace et al., 2022) Projective tests like the "Family Drawing" and "Draw-a-Person" are key for assessing attachment quality and psychological adjustment in educational forensic settings.(Wagner et al., 2015) Early detection through artistic analysis can therefore enable timely interventions and support mechanisms.

#### ➤ *Fostering Gender-Transformative Education*

Educational systems either uphold or challenge harmful gender stereotypes. Integrating gender-transformative practices into early childhood education, such as providing gender-neutral materials and encouraging play beyond traditional roles, enables children to reach their full potential free from restrictive norms. Art-based interventions that which prompt children to depict themselves in atypical roles

(e.g., female scientists or male caregivers) have been shown to broaden perspectives and promote equity and inclusivity(Charissi et al., 2019; Ringsmose, 2019). These approaches can help dismantle rigid societal expectations that often dictate artistic choices and subject matter, encouraging a more diverse range of expression(Montoya et al., 2023; Moon, 2016).

#### ➤ *Empowering Disenfranchised Voices*

Art provides a voice for children and adolescents to convey their experiences and their inner world, which can help society better understand their perspectives and needs (Burke, 2023). Moreover, art not only provides a medium for creative expression but also acts as a bridge between cultures, connecting students to their cultural heritage and encouraging them to explore new perspectives (Jurado & Jurado, 2024). Art serves as an inclusive factor, enabling the understanding and acceptance of diverse sociocultural realities and fostering positive social transformation (Arévalo-Vásquez et al., 2024).

#### ➤ *Synthesis and Conclusion*

The selection of color palettes and subject matter in children's art reflects an ongoing process of cultural negotiation, synthesizing multiple societal influences. Foundational structures such as gender schemes, mechanisms of social learning, and the inheritance of cultural capital all collaborate to shape a child's aesthetic sensibilities from an early age. Although some scholarship emphasizes biological explanations for these artistic preferences, the prevailing body of evidence demonstrates that socialization operating through these various theoretical frameworks constitutes the dominant force, especially as children engage more fully with formal educational settings. This highlights the critical role of educators and cultural institutions in shaping artistic development, as their pedagogical approaches and curated environments directly influence children's engagement with art (Cameron et al., 2024). Consequently, a deeper understanding of how these external factors shape children's artistic expressions can inform the development of more inclusive and enriching art education curricula, ensuring that all children have opportunities for self-expression and cultural exploration ("Pedagogy, Learning, and Creativity," 2023). Such curricula could explicitly incorporate strategies that challenge gendered color and subject preferences, which research indicates often manifest as boys favouring blue and black for "aggressive" objects, while girls opt for red and yellow for "peaceful" and "round" depictions (Alnasuan et al., 2016). This nuanced understanding of socio-cultural influences underscores the imperative for art educators to cultivate environments that intentionally broaden children's expressive repertoires, moving beyond entrenched biases to foster genuine individual and collective artistic exploration. Furthermore, by adopting a sociocultural approach, educators can view children as active participants in cultural production, interpreting and reproducing information from their environments rather than passively receiving it(Lähdesmäki et al., 2021). However, a counterargument emphasizes biological and maturational factors as primary drivers of artistic development, suggesting universal cognitive stages shape drawings independently of

sociocultural influences, as evidenced by Lowenfield's developmental model (Ruiz et al., 2025). Information from their environments rather than passively receiving it (Lähdesmäki et al., 2021).

### III. RESULTS

#### A. Detailed Qualitative Analysis (Formal Elements)

Beyond merely documenting the depicted content, the Methods section outlined an analysis of the creative process, specifically connecting the formal elements in children's art to established creativity rubrics and measures of gender role flexibility.

##### ➤ Line Quality and Physicality

The study detected a marked difference in the physical application of the medium.

- **Male Participants:** Frequently utilized high-pressure strokes, leading to several instances of crayon breakage. These "jagged" lines were often used to represent sound or motion (e.g., "vroom" lines behind a car). For instance, one participant drew a firefighter battling flames, with sharp, overlapping red and black marks signifying both the roar of the fire and the commotion of the scene a vivid depiction that conveyed a sense of urgency and agency, while simultaneously illustrating how creative choices can both reflect and reinforce gendered expectations about action and heroism.
- **Female Participants:** Used lighter, more controlled pressure, with an emphasis on enclosing shapes (e.g., drawing an outline of a dress before coloring it in).
- **The "Ground Line" vs. The "Empty Sky."** One major finding that emerged for me in the study was an interesting spatial difference:

The "Grounded" Girl: 88% of the girls' drawings had a horizontal "grass line" at the bottom of the page to ground their subjects in an orderly, domestic environment. For example, one participant drew a birthday party scene depicting several figures along a green grass line with balloons while flowers and a house were neatly arranged in the background. This composition highlighted more than just stability and domesticity; it also displayed the nature of the affiliative and relational focus of these drawings.

The "Action" Boy: Only 30 percent of boys sported a ground line; and their subjects (planes, superheroes, balls) were in mid-air, which meant they emphasized active movement, rather than an environment controlled and stable throughout.

##### ➤ The Statistical Insights.

Data showed a prominent association between the child's identified gender and visual preferences.

- **Color Utilization.** Girls: 84 percent used pink or purple as an overall color or "hero" in paintings. Boys: 72 percent steered clear of pink entirely, favouring blue, green and black instead. Even when drawing neutral objects (a sun

or a house, for example), the boys used "darker" or "grittier" colors than did girls.

- **Subject matter distribution.** Girls: 81% of girls portrayed affirmative or domestic themes such as families, flowers and group scenes with a particular focus on relationships and caretaking. Only 12% of girls selected agentic or kinetic themes, such as vehicles or action-based scenarios, and 7% chose abstract or non-representational drawings. Boys: 76% of boys selected agentic or kinetic subjects, including vehicles, machines, superheroes and sports, demonstrating a strong orientation toward both movement and agency. 14% of boys' drawings were associated with affiliative or domestic subjects, whereas abstract compositions comprised 10%. These distributions support the finding that children's subject-matter choices are influenced by internalized gender schemas and societal expectations, in which boys lean toward action and power and girls towards relationships and domestic themes.

### IV. DISCUSSION

#### ➤ The "Visual Silo" Effect

The findings indicate children operate in separate visual silos. The latter is often more of an emphasis on boys picking kinetic, conflict-based topics and on girls choosing stable, relational topics, with an impact on the development of differing cognitive and emotional skill bases. This engages boys in spatial navigation and agency while girls pay more attention to emphatic and social decoration. Until childhood, there may be relatively limited expression of an emotion before the development of adulthood, which may have implications for educators as a whole. This bifurcation in artistic expression suggests a need for pedagogical interventions that encourage cross-gender thematic exploration to foster more holistic developmental trajectories in both sexes. Furthermore, considering the developmental trajectory of drawing abilities, such specialized thematic focuses might inadvertently restrict the acquisition of diverse technical skills, such as perspective-taking or the representation of complex spatial relationships, which are often associated with more agentic themes (Grutta et al., 2023). This specialization can manifest in differences in how boys and girls represent spatial relationships, with boys potentially exhibiting a stronger spatial bias and greater gestural flexibility, while girls might focus more on detailed, vital depictions (Hamaoui et al., 2021). Such discrepancies in drawing styles are also reflected in how children approach depicting complex objects, with girls often rendering more intricate details even when those details lack specific names or clear spatial relationships within the drawing (Alvinus, 2017).

#### ➤ The Policing of the "Pink Taboo"

Pronounced gender differences in color utilization, with boys often favouring blues, greens, and blacks, and girls incorporating pink or purple, underscore the potency of social sanctioning mechanisms (Navarro, 2014). This near-universal avoidance of "feminine" colors by male participants indicates that, for young boys, such a choice represents not merely an aesthetic lapse but a high-stakes violation of entrenched gender norms, compelling "self-policing" that subordinates

creative freedom to the preservation of masculine power hierarchies. Academically, these patterns lend empirical support to Judith Butler's theory of gender performativity, as children actively "inscribe" their gender identities through constrained visual repertoires to achieve peer validation and social intelligibility. This observation aligns with findings that boys often actively avoid female-stereotyped colors, including pink, demonstrating a reluctance to be associated with objects and colors designated as feminine by societal constructs (Navarro, 2014). Conversely, girls frequently employ warm colors and a greater variety of hues, depicting positive emotional climates in their artwork (Berti & Cigala, 2022). This phenomenon extends beyond color choice, as studies show that by age three, girls strongly prefer pink objects while boys actively reject them, influencing even their choices for peers' bedrooms (Navarro, 2014). This early and pervasive gendered conditioning, evident in both object and color preferences, highlights the deeply ingrained nature of gender socialization and its manifestation in children's choices (Navarro, 2014). Such rigid adherence to color-gender associations from a young age demonstrates the powerful role of cultural norms in shaping early cognitive categorizations and self-expression, potentially limiting the spectrum of artistic choices available to children (Fulcher & O'Connor, 2023). This cultural phenomenon is further reinforced by the consistent finding that while girls may occasionally choose traditionally masculine colors like blue, boys very rarely opt for pink, reflecting a societal devaluation of behaviors and preferences associated with femininity (Flesch, 2020).

#### ➤ *A Study in Pedagogy (Teaching)*

To counteract the gendered patterns observed in children's drawings such as boys' preference for agentic themes (Fakidou & Mάγος, 2022) and their avoidance of "feminine" colors like pink (Navarro, 2014), (Flesch, 2020) classrooms must function as neutral environments that disrupt societal expectations. Teachers can implement gender-neutral prompts, such as drawing dream characters or visualizing natural sounds, to stimulate imagination untethered from traditional gender schemas.

- **Decoding Materials.** Organizing supplies by hue and saturation, rather than gendered branding or media ties, decouples colors from stereotypes countering girls' affinity for warm hues like pink/purple (Rueda et al., 2023), (Berti & Cigala, 2022) thus broadening creative freedom.

## V. LIMITATIONS AND FUTURE RESEARCH

While this study provides valuable insights into the influence of societal expectations on children's artistic expression, it is important to acknowledge certain limitations, particularly regarding the generalizability of findings to diverse cultural contexts and socioeconomic strata. Future research should therefore aim to include a broader representation of participants from various geographical locations and cultural backgrounds to ascertain the universality or cultural specificity of these observed gendered artistic preferences (Davis et al., 2021). Longitudinal studies

could also track the evolution of these preferences over time, investigating how early childhood experiences with art influence later creative choices and potentially contribute to challenging or reinforcing gender stereotypes. Furthermore, exploring the efficacy of feminist pedagogical approaches in art education across different age groups could provide insights into fostering critical engagement and challenging gendered artistic conventions (Dziwa et al., 2020). Additionally, examining the potential impact of teacher training and curriculum design on mitigating gender biases in art activities would be a valuable avenue for future investigation, especially considering the noted discrepancies in boys' and girls' performance in language and arts domains (Liu & Demetriou, 2025). Such research could build upon existing frameworks that highlight the importance of actively examining and dissolving gender norms within visual art education (Hellman & Lind, 2019). This would also encompass analyzing the influence of digital media and technology on children's artistic expressions, as well as the potential for these platforms to either perpetuate or dismantle existing gender stereotypes in visual culture.

## VI. CONCLUSION

The overarching goal of these endeavors is to cultivate inclusive educational environments where children are empowered to express themselves authentically, unconstrained by predetermined societal gender roles, thereby fostering more equitable and creatively rich learning experiences. Future research could also explore the integration of AI-generated imagery in visual arts education to develop optimal usage patterns (Bian et al., 2025). Additionally, investigations into collaborative versus individual art activities within makerspaces could provide valuable insights into fostering social and personal growth (Peleg & Levy, 2025) while mitigating gendered constraints in artistic expression (Bosse et al., 2024). Finally, cross-cultural studies comparing different countries would further reveal how pedagogical strategies and cultural norms influence children's artistic development (Zhang et al., 2025) and the manifestation of gendered preferences (Metin & Aral, 2020). "Because when we change what we teach art for students, we are changing children's conception of where they can be and how they can grow too. A son who feels safe drawing a flower, or a daughter who feels she can draw a mechanical engine, is a child freed of visual scripts written for the past."

The findings lend further support to the idea that children use art as a way to enact gender. The extreme preference for pink among girls and "action" themes among boys means that children are not drawing from some internal vacuum; they represent the visual culture they consume. This phenomenon underscores the pervasive influence of media and societal narratives on early artistic development, shaping both thematic content and color choices. This cultural transmission suggests that artistic expression in childhood is not solely an individual endeavor but is significantly mediated by external representations and ingrained social constructions of gender.

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