

THE NETWORK OF INFLUENCES THAT SHAPE
THE DRAWING AND THINKING OF FIFTH-GRADE CHILDREN
IN THREE DIFFERENT CULTURES: NEW YORK, U.S.,
MOLAOS, GREECE, AND WADIE ADWUMAKASE, GHANA

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ABSTRACT

THE NETWORK OF INFLUENCES THAT SHAPE THE DRAWING AND THINKING OF FIFTH-GRADE CHILDREN IN THREE DIFFERENT CULTURES: NEW YORK, U.S., MOLAOS, GREECE, AND WADIE ADWUMAKASE, GHANA

Linda E. Kourkoulis

Using an ecological systems approach, this qualitative study examined how continuously evolving, personal living experiences and the ideologies and attitudes of their material, folk, and school culture come to be (re) presented in the construction of images and meaning in children's artwork. The research was conducted with three groups of fifth-grade students facilitated by the art teacher at their schools in three different countries: United States, Greece, and Ghana. Data in the form of a set of autobiographical drawings from observation, memory, and imagination with written commentary were created by each participant and supported with responses to questionnaires and correspondences from teachers and parents. The sets of drawings were analyzed in terms of how the drawings reflect the children's (a) artistic expression as mediated by their interaction with local and media influences and (b) sense of self, agency, or purpose.

The findings strongly suggest that style, details, content, and media use assumed a dominant role within the drawings. Furthermore, these results were reflected differently in the drawings of the cohort from each country. Having considered the set of drawings each child made as a *network of enterprise* emphasizes the active role the children played in the production of the artwork, involving their choices of theme and content, the media images incorporated, and the means by which a task was adapted to suit their interests.

However, the results also show that the specific skills—drawing from observation, memory, and imagination—required by the four drawing tasks had a tempering effect on their creative output, leading to the conclusion that the children’s limited drawing experience constrained their ability to express themselves in pictorial representation with fluency. In view of these findings, lesson suggestions are designed to develop drawing skills across drawing modes in a rhizomatic manner of thinking. Suggestions for future research address exploring the evolution of children’s identity and sense of agency in the world through artistic expression; the role of the environment in which children draw as an embodied and embedded experience in a physical and sociocultural world; and further research into how and why children use images to communicate.

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Chapter I

INTRODUCTION

“What I Am”

If what I am is what’s in me
Then I’ll stay strong-that’s who I’ll be
And I will always be the best
“Me” that I can be

There’s only one me, I am it
Have a dream I’ll follow it
It’s up to me to try....

And what I am is thoughtful
What I am is musical
What I am is smart
And what I am is brave
What I am is helpful
What I am is special
There’s nothing I can’t achieve
Because in myself I believe in oh...

Hope, confidence, self-esteem, agency, perseverance: as educators we search for the best means and models that make these values evident and present in our students’ lives to support them in becoming their “best selves.” The song “What I Am” was co-written by Bill Sherman and Chris Jackson for the American educational children’s television series *Sesame Street* (Fandom, n.d.-k). To support social-emotional learning, this song focuses on emotional challenges and learning to believe in yourself (pbslearningmedia, 2020). The ideas of Martin Luther King, Jr., Maya Angelou, Langston Hughes, and Muhammed Ali, to name a few, are echoed in the song. Performed by will.i.am, it is a testimony to the major cultural influences that have influenced generations of children and that continue to guide our American society today. It

illustrates the power, not only of this song, but of popular culture to reflect personal, social, and cultural ideologies and the role they play in shaping children's lives and our collective history.

The Media Debate

The broadcast of this Emmy-award winning song also touches upon the media debate that the television program *Sesame Street* exemplifies. The Public Broadcasting System was developed in the United States to provide educational programming, to be shown in schools as well as homes, based on a curriculum and using modern television production techniques. Shows such as *Sesame Street* and *Mister Rogers' Neighborhood* became popular with children and parents alike because they were a combination of education and entertainment. With the success of the show, *Sesame Street* in particular drew criticism for inducing cognitive and creative passivity, by providing a wide variety of stimulating visual imagery and formats, and potentially usurping the effectiveness of school settings with entertaining, professionally produced television programming against which a classroom environment could not compete. However, developmental psychologists Daniel Anderson and Heather Kirkorian (2015) have pointed out the historical trend of every medium of communication used by children drawing both praise and concern from educators and social critics alike. Beginning with the introduction of novels for children in the 18th and 19th centuries, media—such as novels, radio, popular music, comic books, movies, television, computer games, and social media—have been evaluated for their capacity to potentially enhance or impede learning and cognition, or for containing content that is illuminating or questionable (Anderson & Kirkorian, 2015).

The purpose of this study is to learn about influences that might shape fifth-grade children's artistic expression and thinking. In terms of ecological theory, children's relationship with their environment can be conceptualized as a living synthesis of

biological and cultural systems that coordinate matter and society. The interplay of these various systems might be thought of as the network of influences that shape and define who we are as a person. Personality and emotions contribute to the creation of selfhood, consciousness, and beliefs that are developed through life experience and guided by self-appraisal. In concert, extrinsic factors including family, community, religion, traditions, culture, language, education, politics and environment inform an individual's worldview, molding creative thought and expression.

Like any graphic image, children's drawings can be analyzed for their formal, observable qualities, such as line, form, and detail. However, as an autobiographical construction, each child's drawing might also be earnestly considered as a visual record that carries intrinsic meaning. To better understand the network of influences on children's artistic expression and sense of agency in the world, this study considers how aspects of cognition and culture, which may otherwise operate invisibly, are made visible through children's images and artwork.

Background

Through ongoing self-reflection on my art and teaching practices, as well as daily observations of my own classroom, children's artwork, and conversations with and among students, I am interested in becoming a better teacher and creating an environment that supports open, authentic dialogue in the art room. By "authentic" I mean students finding their own voice with which to express themselves, whether in conversation, written responses, or artistic creation. This is the goal that has driven the journey I have traveled myself and with my students, through my teaching and artistic practice in the United States, Greece, and Ghana, and participation in a collective research project at Teachers College, Columbia University.

I am an elementary public-school art teacher in New York City, an instructor at Teachers College, Columbia University, New York, and a printmaker. The student population with which I work at P.S. 396 is culturally, linguistically, and economically diverse. Many of our families in the neighborhood are immigrants from the Dominican Republic, Puerto Rico, Ghana, and Yemen. We have children who are bilingual, as well as learning English as a new language, for whom lessons are translated. A quarter of our school's population live in shelters and foster homes. Some of our students commute to the school to attend the ASD Nest Program, a New York City Department of Education inclusion program serving students with ASD, along with typically developing students, in a reduced class-size Integrated Co-Teaching (ICT) model. As students get older, the class size increases, as does the ratio of students with autism to typically developing students. Staff receive training in specialized teaching strategies for students with ASD, including Social Development Intervention (SDI), a support for social/emotional development designed by New York University's Institute for Education and Social Policy.

Figure 1.1. *P.S. 396 Fieldtrip to the Museum of Modern Art*



Some time ago, I began to focus my reflections on how my own art practice informs the way I teach and found that, often, solutions I offer my students come directly out of my experience as an artist. For instance, during an observation self-portrait lesson, a second-grade student asked for help; she wanted to draw an oval, but was having difficulty. The student showed me how the pencil was hard to control, starting from the bottom and drawing the curve toward the top of the paper, as it was aligned vertically, caused the graphite to stick and jump across the page. Watching, I recognized that when I draw, depending on the direction of the line I'm working on, I turn the paper so that my hand can move more freely and I have better control over the pencil and the quality of the line. So, on a piece of scrap paper I demonstrated turning the paper to make the trajectory angle more comfortable for my hand while explaining that she, the artist, has control over her creative enterprise and can make choices for using the materials that suit her purpose. The pupil was very pleased with this solution. Because of my own art practice, I was able to make a direct connection with the student's issue that guided my suggestion for her, and also provide an opportunity to engender autonomy in my student, who has Asperger's, which I mention because she also effectively advocated for herself. In the art room, interactions like this highlight more than practical advice about making an adjustment with a piece of paper. The various influences that have shaped who I am as a person naturally impact my teaching practice in subtle as well as profound ways that merit inspection and introspection.

These moments also showcase what students bring to the art room, the influences that are molding them and the impact these have on their learning experiences. During a fifth-grade class, I noticed the care with which a student drew the contour of his face. Although using the mirror to draw his self-portrait, the shape he drew was exaggerated, quite angular, with a squared-off chin that resembled a manga character or a current

rendition of Superman. When he came to visit during lunch, I asked him why he drew his face in this manner, expecting him to tell me about a manga how-to on YouTube, when instead the student told me that his father taught him to draw male faces this way and that his father is a good artist, he loves to draw. My student told me that he misses his father very much and doesn't get to see him now because he was arrested and is being detained until he is deported to the Dominican Republic. It will be at least a year, he confided, before he gets to see his father again, but his father makes a lot of drawings while he is in jail and gives them to people as presents.

Art-making does not happen in a vacuum. Children bring the circumstances of their lives into the art room where they tell and retell their stories in the work they create for themselves, to each other, and to anyone else who takes the time to listen. We are compelled then to consider what motivates children to give colors they have mixed names such as "Mona Lisa Brown," "Barbie Pink," or "Orange Man Orange," to enduringly draw the pointy "S" Moebius strip with satisfaction, to write the lyrics of a song in a speech bubble, or to include a heart-eyed emoji or character from a video game series, and to ask what we can learn as educators to best support these creative enterprises.

Visiting Ghana

When I first started teaching art at P.S. 396, I wrote a project proposal and joined the "Global Gateway," a networking program sponsored by the British Council for bringing together teachers and classrooms from around the world to do educational partnerships, collaborations, and exchanges. Through the Global Gateway, Linda Adjete, a teacher from the Agona Methodist Church Primary School in Ghana, Africa, and I entered our schools into a partnership. The art project our third-, fourth-, and fifth-grade classes worked on involved making trading cards based on the theme of identity and writing letters to exchange. In addition to creating the cards, our students had the

opportunity to communicate through Skype, a form of online communication, in which the ensuing conversations went beyond the scope of the art project to encompass social and cultural queries, opening up new avenues of curiosity, thought, and perspective for our students. For example, when one of our students whose family originates from Ghana asked if her name had a meaning in Twi, Mrs. Adjetey explained that the student's name indicates both that she is from the Ashanti region and that she is a member of the same tribe as Mrs. Adjetey. I later found out that Mrs. Adjetey is from a royal family.

In their letters, the children showed they were interested in each other's food, the games they played, and the music they listened to. It became of great interest to me to hear what questions they chose to ask and their responses to those questions. The issues of self and identity raised by the exchange project and the very modes of access that brought our schools together, such as a global educational website, email servers, Skype, and Facebook, pointed to the social significance of exploring the possible influences the latter avenues of communication may have on the former building of intrapersonal and interpersonal relationships and their impact on students' learning experiences and thinking processes.

Figure 1.2. *Trading Card Project*



After the completion of our project, I accepted an invitation that summer to visit the school and my teaching partner in Agona, Ghana, where I stayed for 18 days. I had never been to Africa before, was traveling alone, and knew my hosts only through emails, Facebook, phone calls, and Skype. The intention of my trip was to observe and learn more about my colleagues and their students for my doctoral research, which at the time was focused on examining reflective thinking in elementary-age children, after a pilot study I had conducted in my own classroom for my research certification paper.

On my first day visiting the Agona Methodist Primary School, I met the teachers and students. I was surrounded by children eager to greet me in English, and one of the girls introduced herself and asked me if I would be her friend. I was a little surprised by her question and paused for a moment. She qualified her question by adding that she was talking about Facebook, would I be her friend on Facebook? She and the girl standing next to her exchanged glances. Her friend looked at me with a smile and told me that her name is Lady Gaga; do I know Lady Gaga? she asked. Granted, I knew that my students in the Bronx participate in and are influenced by social media, but I was surprised to discover the influence it had on the children in Ghana, specifically in this rural neighborhood. During my visit I learned that the use of social networking sites is common and preferable because it allows people to share information over distances at relatively little cost, especially when compared to making a phone call or printing out a photograph. In light of this encounter, I began to wonder what influences contemporary social media may have on children's art making and thinking.

Following an introductory conversation, instead of teaching one art class as planned, the headmaster made arrangements with the fourth- and fifth-grade students' parents to allow their children to return to school for art lessons after the school was closed for the summer. Unexpectedly, my visit became a pilot study in which I taught a series of eight art lessons with corresponding reflective questionnaires, which I came up

with impromptu, based upon my own experiences teaching art in the Bronx to students who had had little or no previous art making or critical appraisal experience.

My visit also provided me with an introduction to the language Twi, which is dominant in this region of the country, as well as the cuisine, customs, traditions, religion, and politics of my hosts, their families and friends, and of this area of Ghana. I was welcomed into the community by the leading education administrators, including the respective headmasters of the primary and middle schools, the assistant superintendent, and the regional superintendent of the Agona School system, who came to the school to observe me teaching a lesson. During my stay I was also welcomed by the minister, deacons, and congregation of the Agona Methodist Church, where I attended services twice during my visit as an honored guest, occasions that gave me a glimpse into the roles church and religion play in the lives of the members of the community.

Many conversations centered around Ghanaian politics and the history of Ghana, the transition from colonialism to democracy, the platforms of the two main political parties, and the significance of the possible outcomes of the most recent upcoming elections. My hosts also taught me about the history of the Asante, their possible origins before coming to Ghana, and of the Kings and the royal family.

As my exchanges with the two female students my very first day intimated, social media is widely used and understandably so. As cell phones circumvented the need for stationary telephones in homes, social media provides inexpensive ways to communicate with friends and family, send photos, share news, music, and videos, and receive news both from domestic sources and abroad. As a result of this visit, it became clear to me that a study of reflective thinking in fifth-grade students when engaged in critical appraisal of their own art-making process and thinking would involve a greater time commitment than I was able to make in order to establish relationships with the students in Ghana and to develop an atmosphere conducive to exploring thought processes. I returned to the United States and modified the aim of my research.

Figure 1.3. *Students at the Agona Methodist Church Primary School*



The following summer, I visited another village in Ghana, where my friend Linda had transferred, and I met the school's art teacher, Martha. This town, Wadie Adwumakase, is located on the outskirts of the city of Kumasi; though not far from Agona, it is larger and more suburban. The "creative arts" curriculum there includes formulaic, prescribed lessons for drawing, painting, sculpture, and printmaking, as well as music and dance, resembling a course from 1950s England and belying visible, residual influences of British colonialism. During this visit I met the King and Chief, or Krontihene, of Wadie Adwumakase, Nana Owi Asamoah II, and was given the title and position of Queen of Educational Development.

Figure 1.4. *Coronation Ceremony*



Research Group Participation

The visits with my colleagues and their students in Ghana had a profound effect upon my sense of art education worldwide and specifically the influences of communication and social media upon students' lives and creative work. Another experience that shaped the direction of this study was being a participant in a research group composed of New York City K-12 educators, led by Professor of Philosophy in Education David Hansen of Teachers College, Columbia University. The study focused upon the question "What does it mean to be a person in the world today?" The following are some of the questions that resulted from our discussions:

- What would assessment of students, and assessment of teachers, look like were it to take seriously the theme of being and becoming a person in the world?
- How can a classroom culture fuel or foster all participants (teachers as well as students) becoming more engaged, thoughtful, and interactive as persons?
- What is the relation between teaching and learning a particular subject and becoming a person in the world?

Since a component of Professor Hansen’s research was based on his and his assistant’s observations of our classrooms, the question addressed not only our selves but also our students. From my point of view, the most compelling part of the investigation of personhood in today’s world was how this comes to bear on a child’s emerging self. As I considered for myself what it means to be a human being in this world today, my thoughts diverged to question what are the most substantial, weighty, and decisive influences that are exerted on my students and how in particular does this reveal itself in their art-making process and thinking? What does drawing mean to kids today, and to what extent do influences of popular culture and social media impact the shaping of the self?

Turning the introspective lens upon myself, I examined the influences that have factored into shaping who I am, as a person, teacher, and artist. I teach at a NYC public elementary school in the low-income neighborhood that my father lived in as an adolescent when he first emigrated from Greece to America. My being the daughter of an immigrant father and second/third-generation American mother of German-Hungarian descent has certainly contributed to shaping the person I am. My mother used to joke that I was a charter member of *Sesame Street*, the children’s television program that first aired in 1969, and in another paper could be argued to have shaped the character of a generation of viewers with its gentle message of caring, compassion, tolerance, and inclusivity. Of course, as a Generation Xer,¹ I saw the fading middle-class ideals of the Baby Boomers give way to a sense of apathy that was partially driven by the specter of global nuclear destruction and political climate of the ‘70s and early ‘80s. Riding the subway during my daily college commute, I listened to my favorite cassette tapes on a Sony Walkman.

¹Generation X (or Gen X for short) is the demographic cohort following the Baby Boomers and preceding the Millennials. Researchers and popular media typically use birth years around 1965 to 1980 to define Generation Xers (“Generation X”, 2020).

I have a bachelor of fine arts degree from the School of Visual Arts, where I studied life-drawing intensively, and I have also studied at the Provincetown Fine Arts Work Center. For years, creating art provided a means to explore my cultural identity. Through my paintings, often working in a diptych format or with overlapping images to set up a dialogue between two personas, I incorporated ancient Greek imagery and landscape with personal icons of self, beauty and spirituality. Eventually I moved and lived for seven years in the village in Greece where my father was born. The Greeks liked my artwork very much because I was creating a modern conversation based on ancient and Byzantine forms. The local priests as well as the Archbishop of the Coptic Church complimented and admired my painting of “The Birth of Aphrodite” fashioned after Botticelli’s “Birth of Venus” but with an array of five of Jesus’s disciples forming an arch over ‘her’ head. Yet, by some viewers I was cautioned against symbolically representing Greece in a superficial way; they noted, by way of example, that if the ancient Greeks were alive today, they would be baffled by a preoccupation with broken statuary whose colorful painting had all but completely faded away.

As I assimilated to the Greek culture, I noticed myself rejecting some of the Western artistic ideals and culture of my upbringing in favor of stylistic and conceptual forms found more in Eastern culture and the Eastern Orthodox religion. Religious icons provide good examples of the use of a spatial perspective and code of symbols that are very different from the European Renaissance conventions of linear point perspective and rendering of volume. Being immersed as I was in the Greek culture, I began to better understand my perceptions through the Western lens. Over time, I came to see the Eastern icons not as strange, stunted, and flat but as being more spiritually and emotionally alive than the more illustrative, portrait-like style of the religious images that I associated with the Protestant church of my childhood.

However, my experiences living in Greece taught me lessons far greater and more basic than a recounting of an aesthetic awakening. I learned what it means to undergo the

process of assimilation to a culture different from the one in which I was socialized. The term “culture” is a fairly elusive one. It encompasses language and religion, but also social structure and selected dominant values that have been constructed over time and by the forces of history, politics, and circumstances. Indeed, my family in Greece taught me many wonderful things, including dancing and music, folktales and traditions, their knowledge about nature and herbal remedies, and perhaps most important of all, patience, resilience, and pride. Pondering and assessing these aspects or factors that helped to mold who I am and my own artistic expression brought me to start thinking about and ascertaining the network of possible influences that might shape my students and their artistic production.

Statement of the Problem

The authors Howard Gardner and Katie Davis (2013), in their book *The App Generation*, have chosen the “app” or “application” to characterize the changes digital media have effected on our lives to date: fast, on demand and controlled by the individual or organization that designed the app, but especially for the current generation of youth. Gardner and Davis advance the notion that our very concept of generation may change moving forward, with generations being defined “by their dominant technologies, with the length of the generation dependent on the longevity of a particular technological innovation” (p. 13). The student in Ghana who introduced herself as Lady Gaga to see my reaction brought me to consider the nature of presenting oneself on social media. Personas created on social media may have little connection to a person’s internal sense of self or may be described as a form of idealized “superhero” self, yet these digital interactions and relationships certainly contribute to shaping an emerging sense of identity, especially for a young person.

My goal is to become a better teacher. An effective teacher knows her students; however, knowing your students goes beyond cognitive development and categorical interests. Students bring the attitudes and ideologies of their culture with them into the classroom. The term “culture” refers to the categories, meanings, and values that people use to understand the world (Geertz, 1973). It is important to hear from the children about their construction of meanings and not just look at the artistic product as a system of characteristics or at “visual culture” as an entity that stands apart from the construct of culture at large. Art education theorist J. Burton (2008) emphasizes that we look at children’s art “as multi-dimensional constructions, consisting of layers of contextual knowledge that hold personal, conventional, and collective meanings”—the key question being, “yet, what kinds of experiences are these, and how do they become embedded in the images children make?” (p. 228).

The journey I have traveled myself and with my students, through my teaching and artistic practice, my visit to Ghana as part of a pilot study, and my participation in a collective research project at Teachers College, which I have discussed in this introduction, led me to the following line of inquiry. This dissertation is based on a problem concerning how continuously evolving, personal living experiences and the ideologies and attitudes of their material, folk, and school culture come to be (re)presented in the construction of images and meaning in children’s artwork. The nature of these experiences and how they are embedded in the drawings children create led to the following research question and sub-questions.

Research Question

What might be learned about the impact of local and media influences on children’s drawings from observation, memory, and imagination? Given three groups of fifth-graders from schools in the United States, Greece, and Ghana engaged in the same

drawing challenge based on different interpretations of the human figure, what similarities and differences might emerge?

- In what ways are children's sense of self reflected in drawings made from observation, memory, and imagination and to what extent are these reflected cross-culturally?
- In what ways are children's artistic expression mediated by their interaction with media and social media and how is this reflected in their drawings?
- In what way do the drawings reflect children's sense of agency or purpose?

Limits of the Study

- This qualitative, quasi-ethnographic study took place in Mount Kisco, New York, United States; Molaos, Laconia, Greece; and Wadie Adwumakase, Ashanti Region, Ghana.
- The study was limited to one fifth-grade group in each setting consisting of 24 students, 12 females and 12 males, in the United States, Greece, and Ghana.
- This research took place at three public schools in suburban towns:
 - Mount Kisco Elementary School, Mount Kisco, New York, United States
 - Molaos Elementary School, Molaos, Laconia, Greece
 - The Wadie Adwumakase Methodist Primary School, Wadie Adwumakase, Ashanti Region, Ghana.
- The participants were between the ages of 9 and 12.
- The implementation of this research study spanned four class meetings beginning in February and ending in April of 2017.
- The study took place in the art room and was implemented by the art teacher of each respective school in the U.S., Greece, and Ghana: Amy Salerno, Vassiliki Koutsogiannopoulos, and Martha Adjei.

- I was not able to be present at the sites during implementation of the study due to my full-time teaching job.
- The former English Language Learner (ELL) in the New York cohort was proficient in English, and therefore participation was not limited due to a language barrier.
- The lessons and questionnaires were translated into Greek for the participants in Greece.
- The students in the Wadie Adwumakase cohort speak Twi, their native language, but their formal schooling is conducted in English. Their teacher, Martha Adjei, is fluent in both languages and supports student understanding by translating when warranted.

Assumptions

Not to be Debated

This study operates under the assumption that a network of influences exists that shapes the artistic expression and thinking of fifth-grade students. The word “network” is key to the direction of inquiry for this research project because, by definition, it encapsulates various forms and levels of influences that can shape art making and creative thought. There are three definitions listed under the *Merriam Webster Dictionary*’s entry for the word “network”:

1. a fabric made of strands loosely twisted, knotted, or woven together at regular intervals
2. something made up of many interdependent or related parts
3. a group of people sharing a common interest and relating together socially

In addition, it is assumed that a unit of art study comprised of drawings based on the human body is developmentally appropriate for this age group, and that students of this

age have developed a sense of self that is communicable to others through their artwork and written statements.

To be Debated

This study is open to debating the assumption that there is an identifiable, researchable network of local and media influences in operation in each culture which impact children's artistic drawing and thinking. In cultural psychology, as defined by Stigler et al. (1990), a central goal is to "examine the way people make personal use of their customary practices, traditional institutions, symbolic and material resources, and inherited conceptions of things to construct a world that makes sense and to constitute a *life-space* in which they can feel at home" (p. vii). Furthermore, a network of influences plays a significant role in shaping a student's sense of self, as expressed through artistic drawing of the human body from observation, memory, and imagination, because these various modes of drawing allow for different avenues of expression using the drawing medium. In addition, interaction with media and social media has an impact on children's sense of self and artistic expression, particularly their drawing, including some influences that may be revealed to be culture/system-specific and others that are more general.

Type of Study

This is a qualitative study designed to learn about influences that might shape fifth-grade children's artistic expression and thinking. To research this topic, participants were asked to create a set of drawings that represent different depictions of self from observation, memory, and imagination, overseen by their local school arts instructor in their respective home towns: Mount Kisco, New York, United States; Molaos, Laconia, Greece; Wadie Adwumakase, Ashante Region, Ghana. The holistic perspective of this naturalistic inquiry is based on experience as a whole, complex system with interwoven

dependencies, viewing the community and entire culture as a dynamic system within its own social and historical context (Anderson et al., 2007; Patton, 2002). This study is site-specific and longitudinal in respect to the time span involved observing the sites. This research is of importance because, although site-specific, it gives us insights into human behavior and nature that point to the continual importance of looking at people as unique individuals and may lead to further inquiry (Patton, 2002).

Time Frame

The primary data for this study were collected from February through April, 2017, in the form of drawings and questionnaires, which were then sent to me by mail. In the meantime, scorers were apprised of the study protocol, given instructions, and conferred with to fine-tune the scoring criteria and answer any questions. With scorers located both in the United States and Cyprus, an electronic document containing the protocol chart was exchanged through email and Drop Box. Scoring took place between August and October, 2017. Data were then organized, collated, and analyzed. Occasional correspondences with judges and participant teachers were made for clarifications as well as to gather further information.

Participants

The participants in this study were all fifth-grade students between the ages of 9 and 12 randomly selected from the fifth-grade cohort at their respective elementary schools in the United States, Greece, and Ghana. Each group in each setting consisted of 24 students, 12 females and 12 males, for a total of 72 participating students, 36 girls and 36 boys. The teachers were the art teachers at their respective schools in each country. The teachers in this study are ordinary teachers in ordinary classrooms. They were

virtually non-selected as they factored in by location of school and country. The study took place in the art room and was implemented by the art teacher of each respective school in the U.S., Greece, and Ghana: Amy Salerno, Vassiliki Koutsogiannopoulos, and Martha Adjei.

Study Sites

The three elementary schools in this study are public schools that serve the local community in their respective towns in the U.S., Greece, and Ghana. The schools were selected because of their location in suburban towns with approximately the same student population of 500. In addition, all three schools have the same status providing a basic, state-mandated curriculum education without a special charter or vocational focus.

Data Sources

To attain as grounded and unbiased an understanding of the phenomena being investigated as possible, data collection for this study was varied to allow for a triangulated structure of analysis (Maxwell, 2013). The data sources for this investigation are: (a) drawings; (b) student commentary and questionnaire, teacher questionnaire, and correspondence; and (c) researcher field notes, memos, journal. For this study each child produced the same set of four drawings: a self-portrait from observation, a full-body self-portrait from memory, a self-portrait of themselves transformed into a superhero using their imagination, and their superhero self in action, over the course of three class meetings, each of 50 minutes, at their respective schools in the United States, Greece, and Ghana.

Data Analysis

To examine networks of influence using an ecological systems approach meant casting a wide net across micro, meso, and macro levels of analysis for this research (Creswell, 2013). In addition to using multiple data collection methods, due to the subjective and contextual nature of the network of influences on children's creative and thinking processes, the data analysis integrated categorizing and connecting analyses with the intention of making connections among the data without losing the timbre of the original drawings and narratives. As I read and studied the data being gathered, I used open coding for an inductive analysis that was intended to be organic and mutable. Having identified and organized the broad areas of interest, overarching trends, and incongruities revealed through the open coding process, I then identified substantive and theoretical categories based upon the participants' visual, verbal, and written responses (Maxwell, 2013). Having coded and organized the data accordingly, I then investigated for connections across categories, using data from the interviews and transcripts to illuminate these connections and reorganize the information from which new thoughts and conclusions might be drawn, while preserving the individual voices of the participants and my colleagues in the United States, Greece, and Ghana.

Validity

There are several validity threats or variables to this study, such as researcher bias (ethnocentrism), respondent validation, triangulation, and internal generalizability. I will explain each issue as pertains to this qualitative comparative case study and discuss relevant practical solutions that should be taken into account in the design of the study.

The first validity issue concerns researcher bias in that I may select data that stand out, especially given that I am working with data from classrooms in countries from which I am not native (Miles & Huberman, 1994). However, part of what I looked

forward to in conducting this study were the surprises that I was going to learn about myself and my viewpoint. One of the most effective ways of addressing my own researcher bias has been explaining my teaching experience, living in Greece, the preliminary visits that I made to Ghana, and the personal reflections I recorded in my journal and later to discuss the expectations that may have influenced the conclusions of the study (Maxwell, 2013).

In terms of respondent validation, I think the strategy of checking in with participants should be a best practice strategy in general when feasible. As a primarily learner-centered educator, it is second nature for me to check in with my students, especially during class discussion. As concerns this study, not only are a variety of modalities being addressed by the data being collected, such as visual, verbal, and written, which are open to wide interpretation, but there was also the possibility of cultural misinterpretation for which soliciting feedback from the participants was of vital importance, with the caveat that participant accounts remain simply evidence (Maxwell, 2013).

Triangulation was a concern for this study, but not because of report bias, since fifth- graders tend to be straightforward; rather the concern involved my own bias, regarding how I asked the questions. To be more specific, although the data collection methods are varied, I needed to craft my questions and questionnaires in a manner that provided optimum opportunity for the participants to respond (Maxwell, 2013).

Lastly, internal generalizability is an issue for this inquiry as for all qualitative studies. To avoid internal generalization, data collection and analysis were designed to insure the collection of relatively the same type and amount of data on each participant in a variety of forms and to treat the data using the same instruments. Specifically, the protocol charts and scoring used to analyze the data provided numerical data with which to work, with care taken to treat common themes, trends, and differences judiciously and with equal emphasis (Maxwell, 2013).

Educational Aims

In the light of current educational trends toward using reformulated assessment and testing strategies that are increasingly data-driven and formulaic, the aim of this research study is to adjust the lens through which students' learning styles, levels of success, and achievement are viewed by looking at what shapes a child's individual creation of the self, thinking, and creative expression, specifically through their art-making practice, in order, as educators, to best serve and support the educational and emotional needs of our students. Facets of internal networks such as personality and emotions that drive the creation of the self, development of consciousness, and beliefs (Damasio, 1999) through life experience and self-reflection as well as external networks, namely, family, society, religion, traditions, culture, language, education, politics, and environment, shape us as individuals, influence our creativity, and mold our thinking. In gaining a better understanding of these issues and their impact on our students, the goal of this study is to point to the scope and value of the learning and exploration taking place in the art room that are minimized and devalued by regimented frameworks and one-dimensional views of children's development and that fail to consider the full range of experiences children bring to the art classroom and the culture of learning at large. In terms of best teaching practices and specifically culturally relevant teaching (Ladson-Billings, 2001), this study is intellectually significant in that its aim is to look at the individual student as a unique, whole child, rather than a factor of a common denominator, one who is evolving within an environment that is local and yet global, in a world whose parameters are dynamically changing. Developing critical thinking skills is an ostensibly fine goal; however, it is the path to achieving this and at what sacrifice, which leaves room for debate.

Goal

The goal of this study is to understand better the impact of local and media influences upon children's drawings and the complexities of children drawing from observation, memory, and imagination when compared cross-culturally. To better understand the network of influences on children's artistic expression and sense of agency in the world, this study explores how continuously evolving, personal living experiences and the ideologies and attitudes of their material, folk, and school culture come to be (re)presented in the construction of images and meaning in children's artwork.

Chapter Overview

This dissertation is composed of seven chapters, a bibliography, and four appendices, including selected examples of the participants' drawings, a sample of both the participants' and teachers' questionnaire, and all charts and matrices.

Chapter I provides the motivation and background for the study by tracing the journey I have traveled myself and with my students, through my teaching and artistic practice, which led to the research questions and goals of this inquiry.

Chapter II provides the scholarly context for the dissertation. It sets forth the foundational concepts associated with image making in terms of the multi-layered living experience of being in the world, immersion in cultural constructions, intrapersonal dialogue, and interpersonal relationships. To illustrate these dynamics, the chapter reviews the literature pertaining to artistic and perceptual development, electronic screen media, Internet and social media platforms, and the main modes of drawing employed in this study: observation, memory, imagination, and narrative.

Chapter III describes the theoretical framework and methodological approach to this research study, including data sources, collection, and analysis procedures. An

overview of the current art education pedagogies, curricula approaches, and representation of the human figure in the three locations of this study, United States, Greece, and Ghana are included in this chapter as well.

Chapter IV reports the findings of the study involving 72 subjects ages 9-12 from three different cultures (United States, Greece, Ghana), based on four drawing tasks focusing on images of self. Data are presented as narratives using diagrams, charts, and graphs to depict the results with images of drawings to illustrate specific points.

Chapter V returns to the research question and argues that the findings strongly suggest that style, details, content, and media use assumed a dominant role within the drawings and discusses how the results are cast differently within the three cultures. Using autobiographical and anecdotal information supplied by the children, teachers, and family members, Chapter V considers ways by which the drawings reflect trends in the culture at large.

Chapter VI summarizes the findings of the study and the argument that lack of drawing experience mediated children's ability to express their ideas and, in many cases, appeared to invite the use of digital imagery. This chapter fleshes out the implications of this for teaching, offering specific project and lesson suggestions along with recommendations for the field of Art Education moving forward.

Chapter VII traces the trajectory of the study. It sets forth how the idea for the study and research question arose, the problem to be addressed, and a conclusion and suggestions for further research.

Appendix A includes selected examples of the participant's drawings.

Appendix B includes a sample of both the participant's and teacher's questionnaire.

Appendix C includes examples of charts and matrices.

Appendix D includes charts of frequency count raw scores.

The list of References includes bibliographical citations to all works referred to in the text.

Chapter II

LITERATURE REVIEW

Introduction

Humans are predominantly visual creatures. More than a third of our brain is devoted to processing visual information, far exceeding that given over to sound or smells, or those supporting language and movement. (Matthew Walker, 2018, p. 266)

Our substantial capacity for handling visual input, by comparison with other sensory processes, is a powerful indicator of the leading role visual information plays in appraising our environment and informing our thinking and behavior. And so, researchers have looked upon analyses of the earliest known drawings found in caves to gain insight into what conditions prompted the emergence of pictorial representation in order to better understand the connection between visual processing and human behavior. Although paleoanthropologists and evolutionary biologists agree that anatomically modern humans (AMH) had evolved the mental capacity and behavior necessary for symbolic activity¹ some 60,000-100,000 years ago, known representational cave images appeared much later, dating to the Aurignacian (ca. 45,000 to 28,000 BP) (Milbrath et al., 2015). The appearance of cave drawings has been linked to an event that happened 40,000 years ago known as the Cultural Transition, a period of human population dispersal (Milbrath, 2010). Human beings creating a permanent record of images during a time of migration

¹Symbolic activity is the ability to use or engage in an encoding process in which items or actions are representative of something different (Rotheram-Fuller & Kim, 2013).

implies that a social catalyst sparked the creation of images to convey information rather than AMH solely possessing the cognitive capacity to do so. In fact, archeological studies posit the progression in cave drawings such as the Panel of Horses located in the Chauvet cave complex Ardèche, France, to be a product of heuristic learning by remarkable practitioners rapidly honing skills using drawing materials for the purpose of substantiating metaphysical experiences (Lewis-Williams, 2010). In other words, Paleolithic artistic activity was driven by culturally based factors and self-motivated visual media exploration leading to evolution of drawing techniques and use of materials.

Humans, more than any other species, spend their time producing symbolic structure for one another. (Hutchins, 1995, p. 370)

However, analysts have also pointed out that Paleolithic artwork gives us only an incomplete account of early image making, since evolving humans most likely drew on other more perishable supports such as animal skins or sandy ground (Golomb, 2002). Therefore, perhaps a more complete view of early human image making should include the personal images made by individuals for themselves that were more immediate, spontaneous yet transient, and those images that were created in a more permanent manner to communicate information to others.

The use of drawing as a representational system underscores the power of images for conveying meaning, whether individually or to a group; however, creating pictures does not happen in a vacuum. Consider again certain factors in the cave drawings, such as the animals chosen to be represented and those not depicted although they are known to have roamed AMH's habitat, the relatively few numbers of human figures rendered, the particular arrangement of the figures, and their compositional relationship to one another. These all represent choices made to serve certain purposes with rationales that surely were shared among the artists and had an influence upon their symbolic production. In addition, these practitioners chose specific spaces in which to place their drawings, under stark conditions, deep within underground stone caverns, in the dark,

revealing not only planning and preparation but consideration being given to the potential audience for these drawings. Both the conditions under which these drawings were made and the drawings themselves indicate that a variety of influences contributed to the form, content, and execution of these nascent artworks. Therefore, although biological and cognitive processes are required, to the extent that one has the ability to acquire and develop certain skills, visual expression is a product and reflection of the social, cultural, and physical environment.

Since an era in prehistory, long before the creation of a spoken language or system for writing, we have applied our natural capacity for visual processing to creating visual images. It can be said that image making is informed by the multi-layered living experience of being in the world, immersion in cultural constructions, intrapersonal dialogue, and interpersonal relationships. Indeed, it is truly remarkable that children today continue to engage with drawing at all. The word “drawing” is a verb and a noun gerund that describe an action as well as an artifact. The literal translation of the word to draw in Greek (*zografizo*) is “live writing” (Kourkoulis, 2018). When we think upon children drawing, we may start with a baby making their first mark or trace. As an aesthetic mode of experience, drawing can be a record of motion effected by the tool and the surface that is both felt and seen (Gibson, 1986). Spontaneity factors into drawing as a process initiated by sensation but also by emotional, rational, or intuitional energy (Read, 1943). Undoubtedly, the images we create and how they become part of our visual, symbolic expression deserve consideration and study. At the core of this inquiry is how children move through the world, navigating both natural and virtual environments, which are interwoven, and in concert substantiate what we might call reality for children today, and how this experience is made visible in their drawings.

Artistic and Perceptual Development: Child as Synthesis

Childhood refers to a social construct, a period in a young person's life when they are considered to be dependent and therefore need to be nurtured, protected, and taught. In this sense, childhood has only existed for about 400 hundred years, its beginning marked by the invention of the printing press. As printed books became widely available in Europe, the act of reading not only removed human communication from its social context, but created a heightened sense of self-awareness and personal identity. As media critic Neil Postman (1982) points out, "the form of the printed book created a new way of organizing content, and in doing so, it promoted a new way of organizing thought" (p. 30). Postman bases his comment upon a principle from Harold Innis's work on communication theory, which states that "new communication technologies not only give us new things to think about but new things to think *with*" (p. 30). The correlation then follows to consider how contemporary communication technologies are also creating new ways of organizing content as well as remodeling ways in which children become self-aware and develop their personal identities.

An example of children using these new tools to transform language is apparent in the shorthand forms of communicating frequently used in social media (e.g., "lol" for "laugh out loud") appearing in their more formal speech. In his TED talk, *Txting is killing language. JK!!!*, linguist John McWhorter (2013) explains how speech is evolving in unexpected ways. Unlike the conscious process of writing, casual speech is more telegraphic and less reflective. Up until now we have only been able to speak in the manner that we write because we did not have the tools to write in the manner that we speak. Smart phones and mobile devices provide the mechanics for texting as fingered speech. McWhorter views texting as positive evidence of young people being bi-dialectal and of texting as an expansion of their linguistic repertoire. In much the same way,

children transform and absorb visual images into their artistic vocabulary to create new forms of visual meaning using an evolving iconic syntax.

In fact, beyond the role communication technologies play in constructing thinking and reasoning, semioticians Gunther Kress and Theo Van Leeuwen (2006) propose that communication technologies produce such a vast amount of information that using visual means becomes necessary for dissemination, because the verbal mode of expression is no longer adequate. With different semiotic² modes, such as visual, verbal, and gestural as vehicles for presenting information, the suitability of a chosen form of expression depends upon its intended purpose. A comparison of the pages of printed media, such as a book, with the world represented on the screens of “new media”³ reveals an altogether differently constructed world. A key point of Kress and Van Leeuwen’s theory, as well as for this discussion, is that the resources visual representation “offers for understanding and for meaning making differ from those of the world represented in language, and so do the citizens it produces” (p. 32). With the growing role of visual representation to convey information driven by media communication, the focus of this discussion now examines artistic development.

The word “develop” has many meanings, including “to work out the possibilities” (Merriam-Webster, n.d.), which duly suits a description of children engaged in the activity of drawing.⁴ Simply put, artistic development pertains to building a reservoir of symbolic visual elements for working out the possibilities of pictorial expression. As we consider a child’s experience of the world they encounter, it is fundamental to recognize

²Semiotics is the science of signs, a sign being anything that can be used to stand for something else (Berger, 2014).

³New media: means of mass communication using digital technologies such as the Internet (Oxford Languages, n.d.)

⁴This literature review will discuss artistic development specifically in the light of drawing because this study is centered upon drawing.

that children are individuals who grow at their own pace, that artistic growth is multidirectional, and that children themselves are evolving systems situated within a constellation of evolving systems that make up their world experience (Wallace & Gruber, 1999). The work of Deleuze and Guattari (1977) speaks to these points and provides a useful visual metaphor for creative thinking and artistic development through a comparison of a tree with a rhizome⁵ (May, 2005).

In the context of art education, the tree might be thought of as representing a stage view of development, as a system of derivation which is linear: roots, trunk, leaves; one part bound to the next, fixed in situ and terrestrial. By contrast, an underground stem, called a rhizome, is able to grow both horizontally and vertically, shooting roots, leaves, and stems from any point. The rhizome has no beginning, middle, or end, but is always in the center, always in process. A rhizome is not bound to a particular shape or territory and has the ability to connect any part of itself to other entities, including itself. At its core, Deleuze and Guattari's political theory is a study of relationships, whether seated within the individual, or between groups referred to as swarms of difference, whose identity emerges from their shared common difference (May, 2005). There is a way of seeing the world that relates back to the idea of what it means to be a child in the world today, and how children navigate their world. "From their place within identities, these swarms of difference assure that the future will be open to novelty, to new identities and new relationships among them" (May, 2005, p. 114).

Embodied Engagement with the World: Synthesis of Person, Biology, Culture

The question of what it means to be a child in the world today might be visited in light of the interrelationship between person, biology, and culture (Overton & Muller, 2015). Each child, as a person, is a living system whose mind is embodied and whose

⁵A rhizome is "a continuously growing horizontal underground stem which puts out lateral shoots and adventitious roots at intervals" (Oxford Languages, n.d.).

body is embedded in a physical and sociocultural world (Overton & Muller, 2015). In terms of the mind, cognitive, affective, and motivational meanings must be considered in a fully embodied context (Overton & Muller, 2015). Furthermore, for a child, the emotional value of the performance of an action may be more important than the outcome (Boesch, 2001). Accordingly, not only cognition and learning but all psychological functions, including the processes of perception, thought, emotions, and values, in embodied engagement are co-substantiated by the sociocultural and environmental context (Overton & Muller, 2015). A child engaged in drawing is a living system undergoing biological, cognitive, emotional, social, motivational, and personality aspects of individual development. The child's living sphere of experience exists within contextual ecological systems, including the family, home, neighborhoods, schools, and peers, situated within and in proximity to other cultural and environmental systems. Through heuristic experience with visual media, children expand their visual repertoire through embodied experience with the maturation of cognitive capacities. Children, thus, at the center of a complex of systems assimilate signs, symbols, and images from their visual culture, with encouragement and instructional support.

Relationships: How Children Form Identity Through Experience of the World

In her essay, "Speaking in Tongues," the novelist Zadie Smith (2010) creates Dream City, "a place of many voices, where the unified self is an illusion" (Hertzberg, 2009). Smith expresses relief in admitting that we are not autonomous, we do not function independently of influence; rather, our identity is predicated on a sphere of relationships. The multiple voices that contribute to who we are are identities to be embraced, identities that continue to evolve throughout our lifetime. Like development, identity formation is an ongoing process that begins when we become aware of our own being, the state of consciousness.

Consciousness and Selfhood

Consciousness can be thought of as the sense of the self in the act of knowing, from its most basic level to the most complex; it is the cognizance of the presence of yourself in some relationship to an object, without which there is no you (Damasio, 1999). Consciousness is the experience of *being* that gives meaning and value to life, from which memories emerge and creativity flourishes (Damasio, 2010). Possessing consciousness allows us to have a mind and a sense of self. With selfhood comes the attachment of feelings and emotions to those things that belong to the self—our family, home, activities, and so on (Damasio, 2010). As human beings, we developed the ability to reason and predict outcomes in order to deal with novel situations in a changing world, to promote self-preservation and further cooperation with the group as well (Damasio, 1999).

Role of Memory in Identity Formation

Memory, like consciousness, is a cognitive process and embodied experience. Neuroscientific research is unraveling how a life experience becomes a lifelong memory, made possible by the enormous and complex interactions of nerve cells in the brain, a process that has evolved from our ancestors. Each of us has the ability to remember an event that happened in our past, recalling salient details often triggered through one or more of our senses, such as the aroma of a favorite dessert or the texture of a loved one's sweater. It is no wonder that children bring these details that support their recall of a scene from memory to their drawings, because when we remember an event, we reexperience the environment in which it took place. There are, as well, mechanisms of memory, such as working memory, which enables us to grasp several facts at the same time, thereby supporting problem solving, and other mental functions such as pictorial organization and spatial representation, which will be discussed later in the chapter (Kandel, 2006).

Working Memory

Working memory and executive functions are involved in the acquisition of drawing as a symbolic representation system (Morra, 2008). As concerns drawing specifically, the selecting, planning, organizing, and monitoring of thought or actions are processes controlled by executive function. Working memory is the amount of information one can hold in mind and use for cognitive processing. Developmental psychologists consider the role of working memory important to the development of children's spatial cognition, such as the ability to mature from creating *intrafigural* to *interfigural* compositions. Children move from being engaged with directly producing an image (*intrafigural*) to a more premeditated plan of action for conveying *interfigural relations* by planning relationships between figures and then anticipating three-dimensional relationships between elements in the picture and how to demonstrate this on a two-dimensional surface. Therefore, a child's working memory capacity puts constraints on the amount of domain-specific schemes available during the activity, with greater working memory capacity allowing for more complicated schemes (Milbrath, 2015).

Memory and Sense of Self

We might think of memory and visual perception as an interplay between the past and present in a way that helps us refine the information gathered through our sensory experience of the world. It is impossible to have memory without consciousness. Furthermore, consciousness, which cannot exist without memory, arises from the "dynamic interrelations of the past, the present, and the body image (Rosenfeld, 1992, p. 84)" (Searle, 1997, p. 180). The inclusion of the body image in the concept of memory past and present places ourselves in the frame of memory. Our memories help us construct our sense of self, and in forming images of ourselves, we create memories that belong to ourselves and that are linked to our body image (Searle, 1997). We might consider how the practice of preserving memories in digital or analog photo and video

archives, as well as shared on social media, provides an opportunity for building memories upon stored images. With memory and self-image linked, how do visual reference materials to our past modify the memory process when removed from information gathered with our senses from our bodily experience of the immediate natural environment and through contact and interaction with people?

Memory and Culture

In addition to building a personal history and identity, memory also provides for the transmission of culture and continuum of societies. With knowledge gained from past human experience conveyed from one generation to the next, whether recorded in written form or through oral traditions, memory serves to preserve human achievement for the future (Kandel, 2006). In this respect, children's artistic expression not only reflects their personal history but also the collective memory of the society in which they are immersed.

For the purpose of this review, culture is defined as an organized social unit whose members share beliefs, values, understandings of the world, common practices, and information for living across generations (Goodnow et al., 1995). These shared cultural insights and behaviors become part of children's own thoughts and actions as they interact socially with the group (Rogoff, 2003). It is through experiences with people, institutions, and tools of the culture that children actively construct their understanding of the world and themselves (Lawrence & Valsiner, 1993). Culture provides information to help better understand individual and group variations as cultural systems and resources change. Aspects of culture that may otherwise operate invisibly are made visible through images and artwork. Gathering a better understanding of ways in which culture might function is vital for educational research, especially where global connectivity and technological advances exert influence on the creative expression of human thinking (Gauvain & Perez, 2015).

Sense of Agency

Within the fields of psychology and philosophy, an individual's sense of agency refers to the subjective awareness of one's ability to make decisions and take actions that have impact in the world (Hilppo et al., 2016). Young children are active meaning makers, which tells us that they possess a sense of agency, the sense of being able to initiate and carry out an activity, to construct and reconstruct their own identities in a changing world (Bruner, 1996). Identity might be viewed as an evolving set of narratives we tell both to ourselves and others. A child's identity is thereby slowly formed and re-negotiated over time, with consideration to expectations that vary among different cultures and various parts of the child's life (Eaude, 2019; Taylor, 1989). Culture, in this sense, might be understood as a network of references, with every item or event in a cultural orbit relating to other objects or events (Boesch, 2001).

Social mediation refers to the importance of nurture and context, conditions at the center of Vygotsky's ideas about the complex transformations of human growth (Court, 1992). The word "mediation" implies that people have indirect access to their worlds through tools provided by their culture (deAbreu & Elbers, 2005). Considering the socio-historical influences on how culture is internalized by a person, Vygotsky (1978) visualized a progression from the outside in; every function in a child's cultural development first appears on the social and then the individual level. Many artistic development theories have pivoted upon the evolution of this process.

Just as we might view the body as a medium with which we engage with the world, culture may be conceived of as the medium in which identity is constructed. Self-appraisal, meaning evaluating the accomplishment of the task in relation to expectations, together with agency, contributes to self-esteem. Self-esteem combines what one believes or hopes oneself capable of as well as what one may fear to be unachievable (Bruner, 1996). How children experience and express self-esteem varies according to culture and

is affected by the views of other people, especially adults and members of the peer group (Eaude, 2019).

Perception: Negotiating a Novel World

As mentioned at the beginning of the chapter, we have a considerable capacity for processing visual information, known as perception, which plays a key role in appraising our environment and informing our thinking and our behavior, including the choices we make. We perceive the layout of the environment, the objects in the environment, and the events that happen over time in the layout and with the objects, which we assess in terms of what they afford us—what the possibilities are for us to take action (Gibson & Pick, 2003, p. 24). An affordance is a property of the environment as it relates to a person’s capability for making use of it. To perceive an affordance is to detect an environmental property that provides opportunity for action (Gibson & Pick, 2003). Affordances may also be offered by an event such as someone’s facial expression, an issue that social media icons capitalize on.

Emoticons and Emojis

Emoticons and emojis are shortcuts to insure clarity about what our message means by providing the facial expressions missing from written communication, such as email and text, in which the face-to-face opportunity to “read” the other party’s facial cues is not available. Studies have compared the neurological responses involved when the brain sees an emoticon or emoji to those when seeing a real face. Scientists have found a spike of activity in the brain when a person sees a smiling emoticon symbol — :) — that is similar to the one that happens when you see a real face. However, studies conclude that this is a learned response that our brains have been conditioned to over years of encountering :) :) :), since the far less popular (: generates a much smaller spike in response, indicating that the brain needs to work harder to recognize (: as a smile. As the image gets even more graphic, as with pictorial development from emoticon to emoji, the

stronger the identification of the image as a real face by the brain. Emojis, then, give your brain the sense that you are talking to a real person, almost as you would if you were speaking face-to-face (Churches et al., 2014).

Moving through our environment not only enables us to gather information for perception, but also, we coordinate our movements, such as turning our head to view a partially occluded object, to maximize our ability to gather information. In this way, the perception-action relation is reciprocal, operating in a continuous cycle in which perception guides action and action provides new information for perception. Just as we use our skill with our sense of touch for actively exploring objects, and our environment to discover the qualities of art materials and develop our skill for using them, we experience and explore visual culture in our environment that is always changing, always presenting new possibilities, new affordances for visual symbol-making.

Many facets of development have to do with cycles. Perception-action reciprocity (Gibson & Pick, 2003) informs our reasoning and the actions we choose to take. Children play an active role in their artistic development by thinking through engagement with visual media to inform decision making. Action theories are based on a conception of behavior in which human beings design their own actions in order to achieve intended outcomes and monitor themselves to learn if their actions are effective, actions that are informed by our perceptions of our environment.

Interpretation of Information from the Environment

In terms of the act of drawing, visual images can be understood as affordances, insofar as how we might use that information and incorporate it into our own meaning making. Since potential new affordances never stop becoming available, nor do people of any age stop learning to perceive them, development is an ongoing process that takes place throughout one's lifetime (Gibson & Pick, 2003), thereby making how children

move through their world and their relationship to their environment governing factors in pictorial representation.

If we understand visual imagery in our environment as affordances in terms of how we might act upon them, what precisely is the image itself? An image is a signifier, it is the physical form of meaning. Children encounter images that cover a gamut from photos and moving pictures that, although ambiguous, are loaded with perceptual cues, to graphic conventions, images composed with such economy of visual elements that the perceptual similitude with the signified object has been minimized (Pariser, 1979). The images that children encounter in their environment are generally a blend of perceptual and graphic cues (Pariser, 1979). In making a graphic representation, children consciously decide which set of cues, perceptual or conventional, they will emphasize or utilize, depending upon how available these graphic forms are within their range of experience and ability. Interpretation of visual images thereby becomes part of children's artistic process (Pariser, 1979).

Children are often taught about an image as an equivalent rather than as a signifier. The learning of equivalents for young children means that one thing, such as a word or photograph, stands for or corresponds to another object or event (Goodnow, 1977). In terms of drawing, new equivalents are often developed by modifying something that is already in the child's repertoire. A drawing can be viewed as an equivalent since it contains some properties of the original object or event, and convention determines which properties are included and how (Goodnow, 1977).

However, children immersed in visual culture experience images in a context rather than in isolation. Kress and Van Leeuwen's (2006) work on visual semiotics emphasizes building understanding of visual images through the interrelated workings of their pictorial elements, referred to as visual "grammar." Kress and Van Leeuwen's theories grew from having observed that proponents of visual semiotics and practices in education have a tendency to focus upon the equivalent of "words" as units separated from their

context, rather than on “grammar” and syntax, which views the relationship between elements and how the elements combine to form a meaningful whole. Therefore, an emphasis should be placed upon meaning built through the relationships of pictorial aspects and the codes these relationships elicit. The transparency of the code, however, is dependent upon cultural immersion for understanding, bearing in mind that all images are coded. Children often have practiced equivalents to the point of habit, perhaps having incorporated stylized forms seen elsewhere in any variety of visual media or cultural artifacts. In this way, media images, forms, and codes readily enter into children’s drawings and repertoires as they bring what they know and understand from their experience of their world to their art-making process through choices made, and how they are used as well as elaborated upon.

Electronic Screen Media, Internet, and Social Media Platforms

As media usage increasingly becomes part of people’s daily lives around the world, consumers spend an average of seven and a half hours a day with media (Watson, 2020). Most American children are exposed to large amounts of electronic screen media, such as televisions, computers, mobile devices, and game consoles, for entertainment, communication, and educational purposes. Children are subject to screen media both in the foreground of their daily lives, meaning they are actively engaged with the device, and in the background, which means they are being passively exposed to a device that has been left on, such as a television. Screen media falls into two categories according to the behavior required of the user; for example, television and cinema are forms of media with a set programming and content that need only be operated, whereas interactive media, such as video games and mobile devices, require some type of response. These forms of media can overlap as well; for instance, viewers might watch movies on their computer, computer games often incorporate popular television characters, and users might use

multiple devices simultaneously, such as sending mobile text comments about a television program (Anderson & Kirkorian, 2015).

In addition, children are exposed to a wide variety and range of screen media features, including size, resolution, high-definition, 3-D, audio range, surround sound, Internet access, and content. According to studies and surveys based upon data collected in 2009, “TV remained the dominant medium from ages eight to 18, averaging 227 minutes a day (Rideout et al., 2010),” with use of interactive electronic media increasing with age from “5% before the age of 2 years old to more than 35% of screen exposure after eleven years of age (Rideout et al., 2010)” (Anderson & Kirkorian, 2015). In 2020, Americans reportedly spend approximately 369 minutes per day with traditional media, and nearly the same amount of time with digital media (Watson, 2020).

Media usage takes time away from other activities, with studies showing that an increase in interactive media use by older children is done in addition to time spent watching television. Background television and multitasking across devices can result in poorer performances on homework and other tasks, depending on the cognitive demands of the tasks as well as the program. Media offerings also have indirect effects on children’s behavior, depending on whether the content is positive, educational, and motivating or contains harmful, violent, and antisocial content.

Studies also find greater reported usage of media, especially television, by children from lower-income families and racial/ethnic minorities. In addition, this landscape continues to shift with the proliferation of mobile devices. Children who have their own cell phone and data plan are sometimes referred to as *Mobile Kids*. According to a 2016 Nielsen survey, the average reported age for an American “mobile kid” is 10 to 12 years of age (The Nielsen Company, 2017).

In all, there are not many research studies on the underlying cognitive processes involved in children’s use of media or its effects. Similarly, there are relatively few studies that look at gender or ethnicity as factors that mediate the cognitive impact of

media. Generally, media usage has a direct impact on children effectively acquiring intended as well as unintended knowledge, through such platforms as educational programming, advertising, and social marketing, thereby making the format and content by which information and learning are shared critical.

Digital Environments

Recent research has been directed at better understanding children's experience as beings in the world, whose bodies are situated in their living spaces socially, culturally and physically and whose ways of thinking about the world are sensory, embodied, and not routinely articulated verbally (Mackley et al., 2015). Furthermore, these ways of knowing and creating environments are being applied to the digital and physical aspects of place. As children engage with digital media technologies and platforms, online and offline are considered part of the same environment with what Lori Kendall has termed *digital overlay* for cyberspace overlapping with the real world (in Mackley et al., 2015). Understanding digital environments as places that are felt, imagined, and negotiated rather than empty makes them part of the material world and embodied experience. Digital overlay becomes especially perceptible when considering children's play and video games. Children's drawings may be thought of as places of overlay as well.

Internet Appeal

In addition to using the Internet for activities including watching video clips, social media, online games, searching for music, or doing research, children also use the Internet for uses other than what it was intended for. An abundance of school age children, including preschoolers, are contributing to YouTube by producing and uploading their own videos. In the bigger picture of social media, there a general trend of youth using media technology in a manner that suits their own purposes (Duncum, 2014). In addition, YouTube has positive developmental effects as a space in which youth work collaboratively, gaining a sense of accomplishment and support from like-minded peers

(Manifold, 2009). In an arena that is free of supervisory control, children work individually and together to upload videos by following the lead of their peers. In doing so, the act of self-definition is supported by the group as a collective mirror that openly reflects content for interpretation by others also engaged in the process of forming identity (Myerhoff, 1986). However, some of the drawbacks to this cyber engagement include children being vulnerable to peer pressure, cyberbullying, and criminal activity.

Considering the roles digital screen technologies, Internet, and social media platforms play in a child's living experience brings attention to the nature of the experiences created by these devices as an integration of perceptual and physical spaces into one shared reality. Certainly, more studies are called for to better understand how children use tools of the culture to actively construct their understanding of the world and themselves as well as the cognitive, social, emotional, and physical processes involved in children's media usage and the impact this has on children's lives.

Making Sense of the World: Form and Content

Once children enter their school years, several threads of influence have an impact upon children's artistic development and are evident in the form and content of their drawings. Moving away from egocentric thought to more abstract thinking, children begin to examine their relationships with the world, starting from their microcosmic perspective and incrementally expanding their connections into a more macrocosmic view (Burton, 2013). This expanding view of self and the world centers upon the rules and values governing behavior and social interactions. What once appeared to be a carefree, self-guided adventure of playful exploration with paint and paper or any available materials is replaced by an increasing preoccupation for depicting the world in as realistic and literal a manner as possible (Gardner, 1980).

With their attention placed upon making sense of the world, children's drawings represent events from the life cycle, their immediate surroundings, and world events. The use of metaphor, as well, reflects children's move toward more abstract forms of thinking. Although crossing the threshold of abstract thought, pre-adolescents are also still concrete thinkers whose interests are focused on facts and details. Children sketch objects they see in their environment, copy images from available sources such as photos, magazines, or the Internet, and draw from memory, at times adding imaginative flourishes to their drawings.

In addition to the psychological and emotional impact of burgeoning adolescence, this is the age when children begin seeking greater social independence as they discover that they are members of society and the society of their peers (Lowenfeld & Brittain, 1987). Older children's relationships with parents, siblings, peers, teachers, and the larger social-cultural world exert influences that shape artistic growth (Burton, 2013). An expanding view of their relationship to the world opens children up to an awareness of the drawings made by others in their culture, which leads to greater scrutiny and exerts pressure by comparison and through self-appraisal. As children begin to consider the thoughts and opinions of others, particularly in respect to the dynamics of groups formed with their peers, they reflect more self-consciously on their artwork and compare their drawings to exemplary models (Lowenfeld & Brittain, 1987). This new self-awareness also brings to the forefront their own level of drawings skills, a repertoire that might not match the world of images that surrounds them and that they have come to admire (Gardner, 1980). Generally, though, children of the age in this study endeavor to convey their experience of a model or object rather than have to create a photographic likeness as their end goal (Burton, 2013). As their attention turns outward, children who are interested in drawing turn to cultural media, where they find sources of inspiration from comic books, movies, television, graphic novels, Internet browsing, drawing tutorials, YouTube videos, social media platforms, and other popular forums (Gardner, 1980).

Drawing Style and Our Visual System: Lines and Contours

Children from different cultures utilize different sets of notations in their drawings, suggesting that our visual “language” is determined by culturally specific “vocabulary” and “style” (Wilson et al.,1987). Thus, artistic development becomes interdependent on the vast and various relationships, influences, and challenges children encounter in their daily lives. One of these influences is the use of contour line in comic drawings. The predominant choice among comic artists to employ contour as a technique goes beyond a question of style or convention to a matter of effectiveness in conveying meaning through the simplest of visual forms (Lefevre, 2016). Real-world scenes carry an enormous amount of information about color, texture, shading, lighting, and relative position in the field of vision for our perceptual system to process. Line drawings, by comparison, composed with a measured and selected amount of visual representation, nevertheless register powerful three-dimensional images with no equivalent in the natural world. Scientists have concluded that contour drawings not only capitalize on neural codes of vision but that for thousands of years artists have been able to intuitively choose which contours are the characteristically important ones to include in a drawing for the visual system to understand as critical. Furthermore, memory also contributes to the effectiveness of contour drawings by filling in the missing details when a set of contours matches a familiar prototype (Sayim & Cavanaugh, 2011).

Spatial Depiction and Style: Cultural and Educational Constructs

Young people’s growing interest in the world often leads to the desire to depict complex scenes and develop strategies to organize their compositions. Children discover and work through many drawing devices that serve the purpose of describing space, movement, and time. Children may experiment with multiple viewpoints as they continue to use horizontal ground lines placed along the vertical axis of the paper to represent near-far spatial relationships. Or figures may populate the pictorial space without any baseline and with the comparative size scale of figures and objects used to convey spatial

relationships. Images may be placed in the center of the paper and portrayed from conventional viewpoints, either from the front or side. Serialized images are sometimes used to show the movement of a figure or object across space and/or time. Notably, as concerns movement, experiments with the representation of recession or procession may be an effort to capture the direction of movement, relative to the self, or other elements in the picture. Children will try overlapping, using occluding contours to depict projection and make an image stand out from the background. However, it may not be until mid-adolescence that children make drawings with spatial views coordinated in relation to single vantage points (Burton, 2013).

If there is one common thread among studies of children's drawing, it is the importance of experience with visual materials and exposure to art. Otherwise, the prime influences on children's drawing, aside from developmentally enabled abilities for acquiring skills and cognitive processing, are cultural. In this light, the use of linear perspective is a Western system for spatial depiction that is either taught through instruction or picked up from existing models using trial and error.

Spatial Cognition

Interestingly, it has been hypothesized that spatial cognition can be enhanced by television viewing and playing video games. Formal features and production techniques used in movies and television programs, such as understanding the visual sequence created by editing montage and visual devices, or camera angles and zooms, teach children certain spatial inferences. Video games require users to understand and operate a wide range of spatial representations—from simple puzzle games to navigating unfamiliar 3D terrain in adventure games with doorways and portals that cross time and space and imply that events are simultaneously happening in different locations (Boot et al., 2008). Also, the speed with which elements develop in these games may influence the speed of cognitive processing of external information (Green & Bavelier, 2003).

Video Games

Video games may well be one of the most influential forms of contemporary visual culture, one that certainly has influence over how players see the world (Sweeny, 2010). With many variations, the most popular genres include action, adventure, action-adventure, role-playing, strategy, simulation, puzzle, sports, racing, and idle games, also known as clicker games (masterclass, 2020). Although games are expanding to reach a more diversified player base, many games are oriented toward male players. First-person shooter games usually feature a male character and encourage individualized violent action over collaborative nonviolent problem solving (Walkerdine, 2007). Also of interest are the ways in which images become kinesthetic and the body is represented as a digital image in video games (Sweeny, 2010).

Educational Constructs

From a post-structural perspective, teachers and learners attain their identities through the ways in which they are constructed within educational discourses and practices. This approach to teaching and learning suggests therefore that teachers and students are not independent agents, but gain their identities within practices and discourses that are ideologically construed. (Atkinson, 2003, p. 6)

In this vein, links between formal education, traditional culture, and the evolution of contemporary culture become visible in Elsbeth Court's (1992) studies of drawings by children from three ethnic groups in post-colonial Kenya. Court emphasizes that ethnicity and school experience, found to be the two key cultural influences upon study participants, have an interactive relationship. From communities where common or shared symbols are used for social purposes, these motifs appear in children's drawings, evidence not only of a local style but also of its maintenance. As an arena for cultural transmission, consistent use of conventions for depicting space, such as "floating pictures" in which figures are arranged in rows or columns like a word chart without a baseline or ground, are learned through school instruction. Court concludes that the influences of traditions are most evident in the work of those people who have had the

least opportunity to make or look at pictures, whether they are young, have not received instruction, or both.

The influence of traditional visual culture on spatial depiction in children's drawing was also concluded to be the determining factor in Masami Toku's (2000) drawing study conducted with two cohorts of elementary-age children from a Chicago suburb; spanning grades first through sixth, the children were Japanese nationals temporarily living in the U.S. and American nationals of permanent residence. The prevalent use of "photographic," "exaggerated," and "bird's-eye" views by the Japanese children to depict "me and my friends playing in the schoolyard" pointed to the influence of traditional Japanese art, as well as Japanese cartoons, on the depiction of the background in comparison with the American children, who rarely employed such devices in their drawings.

Toku (2000) also cited the influence of the Japanese educational system, in which art is a mandatory part of the curriculum and teachers from kindergarten onwards are well trained in the arts, as a determining factor in the Japanese children possessing a higher level of drawing skills. However, another consideration that was not addressed is the task itself, "me and my friends playing in the schoolyard," which may have created a subtle bias for the American children by referring to a school-based activity that may have prompted a school art style response (Toku, 2000).

A study of the stylistic changes in the drawings of trees by Dutch children in 1937 and Dutch, Italian, and American children in 1986 revealed that the Dutch teachers of 1937 were able to instill in their students a sense of craftsmanship and perseverance that is absent in the drawings of the other groups of children in 1986. In fact, the drawings from the three cohorts of 1986, although from different cultures, had a greater similarity to one another than to the Dutch drawings from 1937. The 1937 Dutch tree drawings were elaborate, containing overlapping branches with individual leaves articulated. The 1986 drawings, on the other hand, employed schemata such as a trunk with a hole or a

v-shaped trunk with an oval or cloud-like shape on top for the leaves of the tree. The contemporary teachers, it was surmised, most likely took a laissez-faire approach to art instruction, to the detriment of their students, leading to the conclusion that in 1937 the children learned more through the act of drawing than their contemporary counterparts in 1986 (Wilson & Ligvoet, 1992).

In her study of cultural identity in children's drawings at two primary (elementary) schools in Kumasi, Ghana, Gifty Quaye (2009) remarked that art lessons almost exclusively consist of copying either from a drawing on the board or their textbooks, a situation that does not allow children to draw from memory nor encourages them to do observational drawing from life. Furthermore teachers often choose the medium for the kids, show them which colors to use, and make specific suggestions of what to add while they draw. Children are also not given the opportunity to reflect upon their drawing with peers. Since the addition of Creative Arts as a subject of study in 2007, the educators teaching art at most elementary level schools in Ghana are generalist teachers with little to no background in art education. Particularly in Ashanti, Central and Northern regions of Ghana, generalist teachers often teach art in lecture form or instead use the instructional periods allotted for Creative Arts to teach English, Mathematics, and Integrated Science. Having recognized the lack of preparation and comfort generalist teachers have around teaching art, N. A. Opoku-Asare et al. (2015) developed a research project to address the issue by training a group of teachers to support students to interact with materials, tools, and various art-making processes that enabled students to see major concepts, big ideas, and general principles in practice. The study concluded that regular training programs should be organized by the Ghana Education Service in collaboration with Arts Education specialists to prepare teachers to engage their students meaningfully when teaching Creative Arts (Opoku-Asare et al., 2015).

Drawing Across Cultures

According to the Tate Museum (n.d.) website, drawing essentially is a “technique in which images are depicted on a surface by making lines.” The word “drawing” also has broader connotations as a medium for thought, or means of recording, and even as a form of performance. As Jeff Adams (2017) observes, drawing is appealing because its possibilities are infinite; although marks may be culturally specific, “there is no limit to its iterations, nor any to its potential for cultural appropriation” (p. 242). The Greek term for drawing, *zografizo* or “live writing,” as mentioned earlier, reminds us, as with any language, of the differences and similarities in meaning both the act of drawing and the artifact might hold across cultures. Phil Pearson (2001) makes the distinction that the reasons children engage in drawing are not necessarily connected to the drawings produced and therefore the only way to incorporate all the ways of knowing children’s drawing is to acknowledge that it is “a social practice” (p. 348).

Wilson et al. (1987) also emphasize that visual and verbal languages alike are culturally constructed. For example, there are many societies that produce quite different forms of the human figure from those aspects of the human figure chosen as distinguishing features by Western drawers (Cox, 1993, p. 47). “Characteristics such as figure size, facial details, facial expression, and arrangement of figures have revealed tremendous cultural variability in comparative analyses of children’s drawings” (Gernhardt et al., 2016, p. 1070). Art education researcher Elsbeth Court (1987) also points out that comparisons among different cultural groups are deeply problematic, since the human figure may not have the same significance in all cultures. “There are some cultures in which the individual human figure is not the main focus of attention in children’s drawings” (p. 107). It is key, therefore, to assume that drawing signs may carry different meanings stemming from children’s cultural and socialization experiences (Gernhardt et al., 2016).

Theories on pictorial representation and children's creative thinking range from the natural sciences to the social studies (Lange-Kuttner & Thomas, 1995). With each investigator's inquiry filtered through the lens of their discipline, an expansive array of approaches and interpretations is created as a result. A majority of research on children drawing from observation tends to be focused on issues pertaining to developmental psychology, with artistic development approached as an autonomous system dependent upon cognitive development (Cox, 1993; Freeman & Cox, 1985; Milbrath & Lightfoot, 2010). In this vein, memory drawing is considered as a capacity developing in support of representational enterprises. The weight of these theories rests upon examining the problem of representation of an object or person driven by the conviction that children engage in the activity of drawing with the purpose of making realistic representations of the world around them and/or that certain schemes appear universally in children's drawings regardless of cultural background (Pinto et al., 2011). Here the distinction to be carefully considered is made by Pariser et al. (2008) between *graphic development*, defined as "the gradual acquisition of certain forms, conventions and technical skills" that differ according to people's education, age, and cultural background (p. 294), and *artistic development*, referring to developing artistry, a highly contextualized category "rooted in cultural practice (Freeland, 2001)" (Pariser et al., 2008, p. 294).

In addition, as a communicative process for making meaning, scholars claim that the intention of children drawing everywhere often is to create "effective representations" even when their image-making efforts are unrecognizable (Pariser et al., 2008; Willats, 2005). These representations can range from naturalistic images of people, places, and things, to stylized images from popular media, to abstracted representations of a referent (Pariser et al., 2008). The caution here is to account for the influence of culturally constructed expectations exerted upon the child's creative process, particularly concerning the teleology of the participants from the three cultures in this study. Cultural psychologist Carol Lee (in Daiute, 2010) addresses the dichotomy set up, especially in

K-12 education, between the “everyday,” popular, ethnic culture and the “canonical” mainstream culture positioned as a universal standard and how these distinctions bias student’s motivation and achievement (p. 170). It is necessary to acknowledge the implications established in educational settings that continue to belong to Western modes of thinking and expectations that have influenced the dominant cultural models, aesthetic theories, and educational pedagogies, not only in Western cultures, but in every place colonized by the West. These models of Western influence persist in educational settings in the United States, Greece, and Ghana and continue to pervade drawing pedagogy. Therefore, cultural definitions of drawing are likewise influenced, with very little literature devoted specifically to similarities and differences in defining drawing across cultures, especially at the elementary level.

In many cultures, when asked what is art, the most frequent response is drawing above other mediums. Differences in what is understood to be drawing certainly exist from one cultural setting to another. For example, Rachel Mason’s study (cited in Stokrocki, 1990) based upon herself teaching Hindu and Muslim students in India illustrates the incongruence between “Western mimetic representation” and Mideastern abstract style of representation. Mason’s findings stated that the children’s depictions of “real-life” settings were more memory informed and their self-portraits based in fantasy (p. 184). Art educator Mary Stokrocki (1990) explains the traditional Muslim cultural taboo on drawing figures may have influenced the children’s drawings despite having permission by their parents to do so. Plus, the author’s disappointment in the seeming lack of personal expression as evidenced in the decorative borders produced by the children is suggested by the reviewer to be a misinterpretation of repetitive patterning in Mideastern art which is a form of prayer.

Another example of different ways of knowing expressed in drawing across cultures is how knowledge through physical engagement with the environment is expressed graphically. Adolfo Ruiz’s (2017) study on Tlicho lands (a self-governed

Indigenous region in Canada's Northwest Territories) of drawings by Tlicho elders reveals that line drawings represent distant memories of the land as it was in the past informed by oral-storytelling⁶ and the social practice of walking ancestral trails. Ruiz states that knowledge generated through experiential relationships with the physical world is an epistemology in its own right. This way of knowing guides artistic expression in many cultures, including Chinese literati landscape synthesis of calligraphy and painting executed from recollection after months long sojourns in nature without making so much as a sketch (Department of Asian Art, 2004).

Indeed, what it means to draw is a multi-layered and nuanced socially and culturally embedded practice. Generally speaking, there are four approaches to drawing an image: observation, memory, imagination, and copying. Each mode facilitates a different means of entry into the creative process to be explored in the next section within the context of this investigation.

Drawing from Observation

Drawing from observation is one of the major focuses in this study. Observation drawing is sometimes referred to as perceptual drawing since the artist is rendering the physical world as it appears (Curtis, 2009). Generally, a self-portrait from observation implies looking in the mirror to gather visual information from real life with which to draw a picture of self. Drawing a self-portrait from observation is an activity that involves interpretation and memory, as children work out which set of cues, perceptual or conventional, they will use in their drawing, depending upon how available these graphic forms are within their range of acquired skills and experience.

⁶Here I would like to mention as well the connection between narrative arts, storytelling, and oral-storytelling traditions across art forms such as music with lyrics, including rap since these images as well enter into children's art-making (Lee, 2010).

There is a distinction between representation and resemblance, since a drawing may represent someone or something without bearing any resemblance to it whatsoever. Drawings can be thought of as representations by means of symbolization or reference and also aim to resemble either the self in situ or an internal picture of self (Goodman, 1976). The internal model as it exists has only been broadly identified to be an image in our mind or a set of characteristics or even a sequence of actions we perform that is guided by an internal strategy (Cox, 1993) known as an operative scheme (Morra, 1995). The picture we visualize in our mind may seem very clear, yet when we attempt to concretize it on paper, our grasp of the image turns out to be rather tenuous (Matthews, 1999).

Creating a drawing based mainly upon perceptual cues requires observational skills built up through experience, diligence, and adequate working memory in order to organize and manage all of the facts, such as drawing the various features in a cohesive whole in relationship to the shape of the face, head, neck and shoulders. Drawing in this manner calls upon simultaneously integrating sensory, cognitive, and memory processes smoothly while handling a variety of information at different levels of analysis (Tomaselli, 2013). Especially for children in this elementary age group, drawing formally from observation is not an entirely natural self-directed activity (Burton, 2013; Matthews, 1999). Children who draw self-portraits are usually invited to do so by an instructor. Drawing from observation enters children's visual repertoire with encouragement from a teacher or mentor. Observation drawings are distinguished by intense and careful attention to details, such as textures, patterns, folds of clothing, hair, and facial expressions, since children are interested in capturing the essence of the portrait subject rather than achieving a photographic likeness.

Drawing from Memory

Memory is a fascinating biological function; it can be as elusive as breathing without being aware of the process, or as perfunctory as recollecting the calendar date. Memory may only present itself to our conscious mind because it has been coaxed to the surface by an associative thought, a sensory stimulus, or interaction with another person. Aristotle made the distinction between memory and sensory-perception by assigning memory to the past and sensory-perception to the present (para 2), and, in so doing, partially defined the purpose of these cognitive functions. He described memory as “the state of a presentation, related as a likeness to that of which it is a presentation” (para. 12), which is a construct now known as a memory trace. A memory trace makes sense as the likeness of an image we present to ourselves. However, Aristotle’s memory trace was understood to be preserving information in a representation or copy of the original stimulus, which was permanent and immutable.

Yet, as discussed, our sensory-perception system operates in a real world where discriminations are made under varying and unpredictable conditions, which requires us to adjust the criterion to match changing conditions. In the 1930s, experimental psychologist Frederic Bartlett developed an alternative theory known as Criterion Setting Theory (CST). Since the purpose of cognitive systems is to maximize performance, the mechanism of memory might be thought to closer resemble “a “construction” based on “a whole, active mass of organized past reactions or experience” continually modified by new experiences, referred to by Bartlett as a schema (Treisman & Lages, 2013, p. 213). This is memory as mutable in order to approach/approximate the optimal criteria. Bartlett proposed flexibly modifiable schemata (Treisman & Lages, 2013), anchored in the need to optimize discrimination performance. Biologist Gerald Edelman also regards memory as an active process of “reategorizing on the basis of previous categorizations” instead of remembering in the traditional sense of retrieving a memory from a personal

storehouse of knowledge and experience (Searle, 1997, p. 44). Our memory process is a continuing activity of the brain rather than a storehouse of preexisting images (Searle, 1997).

As mentioned earlier, when we recall an event, we experience the atmosphere in which it happened (Kandel, 2007). In his book *Drawing From Memory*, Allen Say (2011) illustrates how moving to a new and startlingly different environment can separate us from our memories, while returning to a place in the past can bring back memories in vivid detail. Having moved to the United States, Say had forgotten that he was the model for a comic book character in Japan, created by his teacher. As Say was compiling a book of his own, he asked his teacher's daughter for some drawings made by her father, who had recently passed away. The daughter then pointed out that the self-portrait by Say that appears in his own book and the comic character created by her father are both drawn wearing the same knapsack. It might be said that Say had consciously forgotten something his subconscious had not—the point being that memory is also a collective process; our relationships with others help support our ability to recollect and make connections between the past and present.

Memory drawing requires recall as well as working memory to hold onto and organize the information. Children might draw an image they have practiced from copying a photo or graphic representation of themselves or other people. Children's drawings from memory tend to be schematic, meaning symbolic or simplified, perhaps depicting the main lines of the model, without much detail except for a person's hair or patterns in clothing, which may make the drawings appear flat. As a drawing strategy, working from memory generally relies upon a graphic vocabulary that has already become part of the child's repertoire. As a result, children working from memory tend to draw at the level at which they are comfortable (Carroll, 2008). Unlike observation drawing, which carries the obligation to represent the subject convincingly, memory drawing allows children to experiment with visual ideas learned from copying and

observation drawing unencumbered by pressure to measure up (Burton, 2013). In this way images from popular media sources have an opportunity to enter into children's drawings, especially when the child's artistic repertoire and experience do not comfortably meet the challenge of the drawing task.

Memory and Popular Media Studies

Memory also plays a crucial role in Brent and Marjorie Wilson's body of research on culture and children's image making. Beginning with investigations into gifted and productive young people in art, the Wilsons (1977) observed that every image drawn from memory by these teenagers could be traced to the popular media. The Wilsons concluded that older children draw the way they do because they learn from their peers, parents, and siblings, and also borrow from images in the popular media, such as comics, television, illustrations, and photographs, with the fine arts playing so minimal a role that such images are only sourced from how-to-draw books. From the conclusion that all of children's graphic images, have their origins in the images of others, Wilson and Wilson went on to do a series of studies to illustrate that children's imagery is not universally the same, that it is subject to the influences of time, place, and art, and that this holds true not only for teenagers, but for young children, too. Wilson (2008) also found that visual culture is transmitted across borders, "from one child to another, one village to another, from one country to another, and from one century to another. Teachers don't teach their students to draw figures using these schemata; kids teach kids" (p. 257).

Not only is the graphic "language" of children's drawings characteristic of the culture, but so is the "syntax." As an example, Wilson (1992) found the structure of children's drawings from Egypt and Japan to be distinctive, with the Egyptian children frequently composing symmetrical images with a figure in the center and one on either side, whereas the Japanese children used spatial techniques such as planes, occlusion, and cropping. The Wilsons noticed, as did E. Court in Kenya, that children with the least

exposure to popular sources actually produced the most restricted kinds of images (Wilson, 1992); for example, the children with an extremely restricted visual vocabulary, living in an Egyptian village, drew human figures with very little variation.

Kress and Van Leeuwen (2006) make the noteworthy distinction that semiotic principles and processes are the universal aspects of meaning, whereas the culturally specific signifiers and symbols are made apparent in their usage over time. Many studies of children's drawings that trace the life of specific images or graphic devices find these images and devices to be culturally generated when revealed through historical change. For instance, Wilson and Wilson (1982) researched the use of the two-eyed profile that was prevalent in children's drawings at the end of the 19th century. The two-eyed profile describes a face drawn in profile with two eyes instead of one, since children's understanding that a face has two eyes overrides the actual appearance of only one eye when the face is in full profile. The Wilsons hypothesized that this way of drawing a face was passed down through generations by children teaching it to one another. Once Sunday comics became readily available with a wide variety of images of the human figure, the two-eyed profile disappeared.

Drawing from Copying

Children make copy drawings as a means to learn, both from models as well as each other. The act of copying, in terms of representation, also implies creating correspondences to re-present experience (Brann, 1991). Copy drawing sometimes suffers from a negative connotation; however, copying provides visual learning through an active process of deconstructing and reconstructing ready-made images (Matthews, 1999). Art historian Ernst Gombrich (1960) emphasized how all drawings are sourced from earlier drawings created by other individuals, whether the immediate work of peers or archival images by acknowledged masters. According to art educators Brent and

Marjorie Wilson (1977), copy drawing is not only a productive means to learn drawing, it is how most gifted artists master their craft (Gardner, 1980; Golomb, 2004).

Drawing from Imagination

As stated at the beginning of the chapter, to develop is “to work out the possibilities” (Merriam-Webster, n.d.). Imagination is a form of reasoning, which gives us the capacity to process a variety of information and imagine the possibilities worth pursuing. Imagination plays a key role in development by giving an individual the ability to conceptualize (Egan, 1999). According to Maxine Greene (2001), philosopher John Dewey once characterized imagination as the capacity to look at things as if they could be otherwise.

[Imagination is] a *way* of seeing and feeling things as they compose an integral whole. It is the large and generous blending of interests at the point where the mind comes into contact with the world. When old and familiar things are made new in experience, there is imagination. When the new is created, the far and strange become the most natural inevitable things in the world. There is always some measure of adventure in the meeting of mind and universe, and this adventure is, in its measure, imagination. (Dewey, 1980, p. 267)

Again, the intersection of thought and worldly experience is how Dewey describes imagination. Greene (2001) asks her readers to give special consideration to the “as-if” power of the imagination to move us into an invented world through the portal of our own lived experience. Taking Greene’s comment a step further, operating in the state of as-if can also be a means of working towards potential yet to be realized or achieved.

Art educator Elliot Eisner (1993) declared the act of representation to be an act of invention, since it is impossible to display an experience in the form it originally appeared. Memory and imagination also overlap when they are brought into action through playful engagement. More than cognitive functions, memory and imagination are creative experiences connected by a concept named “intermediary space” by

psychoanalyst Donald Winnicott (1971). Intermediary space describes that place in our psyche where we get actively lost in creative play, until self-awareness interrupts and we find our own selves thus engaged (Bamberger, in Schön, 1991). “It is in playing, and perhaps only in playing, the child or adult is free to be creative” (Winnicott, 1971, p. 53). Indeed, the zone of imagination provides the opportunity for children to discover themselves in the process of creating rather than the product (Winnicott, 1971). Imagination is the conduit between our thoughts and our sensory experience of the world (Brann, 1991). The imaginative process will be further explored in the next section on the role of narrative and visual literacies in the drawing process.

Drawing as Narrative

Up until this point we have been discussing the ways in which the forms of meaningful images can be produced and how we come to understand these meanings through cognitive mechanisms as well as cultural and social influences (Cohn, 2016). We have looked at how drawings can be made to represent perceived, visual cues, as well as to be a visual representation of an object or experience (Lefevre, 2016). Beyond the creation of the sign itself lies the conceptual process, elicited by narrative, one of the most common intentions that motivate drawing (Smith et al., 1997). Narrative drawing happens in a single frame, as well as a sequence of images, which appear in storybooks, comic strips, cartoons, graphic novels, and other forms of storytelling media. Through their drawings, there are narratives children tell to themselves and those they tell to others (Latham & Ewing, 2018). These narratives tend to be fantasies, much like dramatic play, but using the vehicle of drawing. Narrative drawings are showcases for emotionally charged themes, which reflect issues of collective concerns and incorporate shared images of youth culture (Golomb, 2004).

Narrative drawings also bring together multimodal forms of expression, including visual, symbolic, and written cues. Anthropologist Barbara Myerhoff (1986) speaks of narrative expression as the means by which “people make sense out of themselves, for themselves by showing themselves to themselves through storytelling” (pp. 261-262). In addition to self-recognition, narratives act as a collective mirror, reflecting content for people to interpret, and to consider who they think they are, should have been, or might yet become (Myerhoff, 1986).

Summary

This entire review might be understood as a discourse on meaning-making for self and others. Returning to the beginning of the chapter, the work of Edward Hutchins (1995) determines that the cognitive capacities of human beings were developed to operate in the wild. In the sense that cognition is fundamentally a cultural process, we are symbol manipulators who work as participants in socio-cultural systems, and, in this capacity, we create symbolic structure for ourselves and one another (Hutchins, 1995).

Chapter III

METHODOLOGY

Introduction

This chapter begins with a description of the conceptual approach, statement of the problem, and resulting research question followed by the theoretical framework upon which this study is grounded. Next, data sources and collection of data are described, and the rationale and data analysis procedures, including scoring and matrix coding, are reviewed. The third section of this chapter presents current art education pedagogies, curricular approaches, and representation of the human figure in the United States, Greece, and Ghana.

Part I: Framing the Study

Type of Study

This is a qualitative study using an ecological theory approach to children's artistic development, which views the child at the center of their socio-cultural environment (Bronfenbrenner, 1979; Milbrath, 2015). The ecological systems theory developed by psychologist Urie Bronfenbrenner proved to be a useful approach for this inquiry. Working within a constructivist-interpretive paradigm and informed by three pilot studies, I organized and analyzed the data using grounded theory methods.

Indeed, there are many advantages to qualitative inquiry. Miles and Huberman (1994) argue that qualitative analysis is a powerful method for assessing causality, for a

number of reasons. With a fine-grained focus, qualitative analysis can identify mechanisms and complex networks of events and processes in a situation. It can reveal underlying variables, because a qualitative approach allows for cycling back and forth between variables and processes. Another advantage of a qualitative research investigation is that small-scale data afford a detailed narrative inclusive of a wider range of experiences. “Rich, thick description allows readers to make decisions regarding transferability (Erlandson et al., 1993; Lincoln & Guba, 1985; Merriam, 1988),” explains John W. Creswell (2013, p. 252). Providing a detailed narrative about the participants, and in this case their artwork, that is informed by the data enables the reader to “transfer information to other comparable settings that share characteristics (Erlandson et al., 1993, p. 32)” (Creswell, 2013, p. 252).

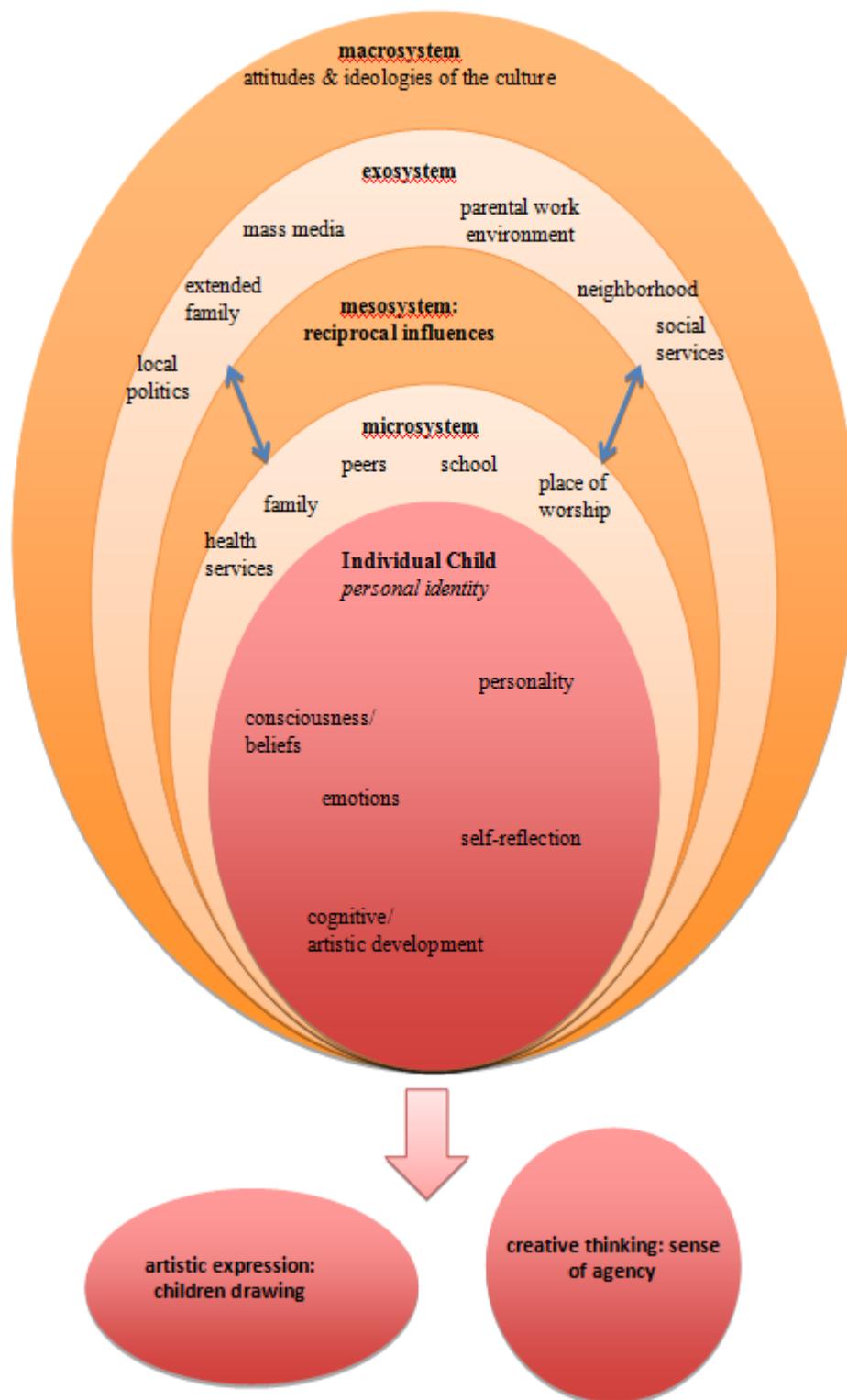
Theoretical Framework

We all live every day in a virtual environment, defined by our ideas. Those environments are changing. (Michael Crichton, *Disclosure*, 2012 [1994], p. 441)

The focus of this study is to better understand the intersections among how children compose their visual ideas, the formation of their sense of agency through meaning-making, and the influences in their changing environment that have the greatest impact on the creative choices children make. In a broader sense, the purpose of this study is to examine the connections between the personal, social, and cultural phenomena that lead to each child at the center of this inquiry and to consider whether this is indeed the educational environment we intended to create, and if not, what alternatives can be proposed in view of the findings of this study (Lincoln & Guba, 2013, p. 10). Therefore, this examination is theoretically supported by the ecological systems approach, the relational developmental systems’ embodied action approach, Gruber and Wallace’s evolving systems approach, Judith Burton’s art education theories, and semioticians Gunther Kress and Theo Van Leeuwen’s theories on the “grammar” of images.

Ecological Systems Approach

Figure 3.1. *Concept Map*



The ecological systems approach provides a framework for investigating different levels of influence of various relationships on individuals within the context of communities and the larger range of society. The ecological systems approach works well in conjunction with a constructionist frame since the interrelatedness of the micro, meso, and macro worlds are recognized, and also because actors cannot be separated from structures since they are all socially constructed. In terms of ecological theory, a child's relationship with their environment can be conceptualized as a living synthesis at the center of biological and cultural systems that coordinates matter and society as illustrated in Figure 3.1.

Relational Developmental Systems' Embodied Action Approach

Each child, as a person, is a living system whose mind is embodied and whose body is embedded in a physical and sociocultural world (Overton & Muller, 2012). In terms of the mind, cognitive, affective, and motivational meanings must be considered in a fully embodied context (Overton & Muller, 2012). Accordingly, not only cognition and learning but all psychological functions, including the processes of perception, thought, emotions, and values, in embodied engagement are co-substantiated by the sociocultural and environmental context (Overton & Muller, 2012). The interplay of these various systems might be thought of as the network of influences that shape and define who we are as a person.

Evolving Systems Approach

The theory of Gruber and Wallace (1999) accords three guiding ideas to the creative person as it pertains to children: it is fundamental to recognize that each child is an individual who grows at their own pace; artistic growth is multidirectional; and children themselves are evolving systems situated within a constellation of evolving systems that make up their world experience.

Judith M. Burton and Artistic Development

Art education educator and theorist Judith M. Burton's work emphasizes the exploratory nature of artistic development, situated within real-world influences and hands-on experiences with art media.

We have learned over the years that artistic development does not unfold like a beautiful flower but is propelled by personal experiences with materials and visual ideas, teacher inspired motivational challenges, stimulus from the media and surrounding culture. (Burton, 2020, p. 1)

Children thus, at the center of a complex of systems, acquire drawing as a visual repertoire through heuristic experience with visual media that expands with the maturation of cognitive capacities, through embodied experience, the assimilation of signs, symbols, and images from their visual culture, and with encouragement and instructional support.

Kress and Van Leeuwen: The "Grammar" of Images

Beyond the role communication technologies play in constructing thinking and reasoning, Kress and Van Leeuwen's (2006) work on visual semiotics emphasizes understanding of visual images through the interrelated workings of their pictorial elements, referred to as visual "grammar." Kress and Van Leeuwen's theories grew from their having observed that proponents of visual semiotics and practices in education have a tendency to focus upon the equivalent of "words" as units separated from their context, rather than on "grammar" and syntax, which views the relationship between elements and how the elements combine to form a meaningful whole.

Part II: Design of the Study

Participants: Students and Teachers

Three groups of fifth-grade students in three different countries, United States, Greece, and Ghana, participated¹ in the study at their school. There were in total 72 students in the study, 36 boys and 36 girls. The cohorts were equally distributed with 24 students from each school and an even ratio of females to males.² The art teacher³ from each school facilitated the study according to three lesson plans and accompanying instructions designed by the researcher. Each art teacher was sent the lesson plans in advance with corresponding examples of drawings from a prior pilot study carried out in their respective country and a list of materials to be used by the subjects. Through email and phone conversation, the researcher and facilitating teachers discussed the step-by-step implementation of the four drawing tasks, and questions were answered. However, in order to prevent unnecessary bias in the data, the research question was not shared with the teachers.

The Sites

All three sites are public schools in suburban areas; Mount Kisco is a suburb of New York City, United States; Molaos is a suburb of Sparta, Greece; and Wadie Adwumakase is a suburb of Kumasi, Ghana (see Figure 3.2). These sites were chosen because of their location in regions where I had professional educational as well as personal experience. I am a practicing art teacher in New York, have lived and worked in

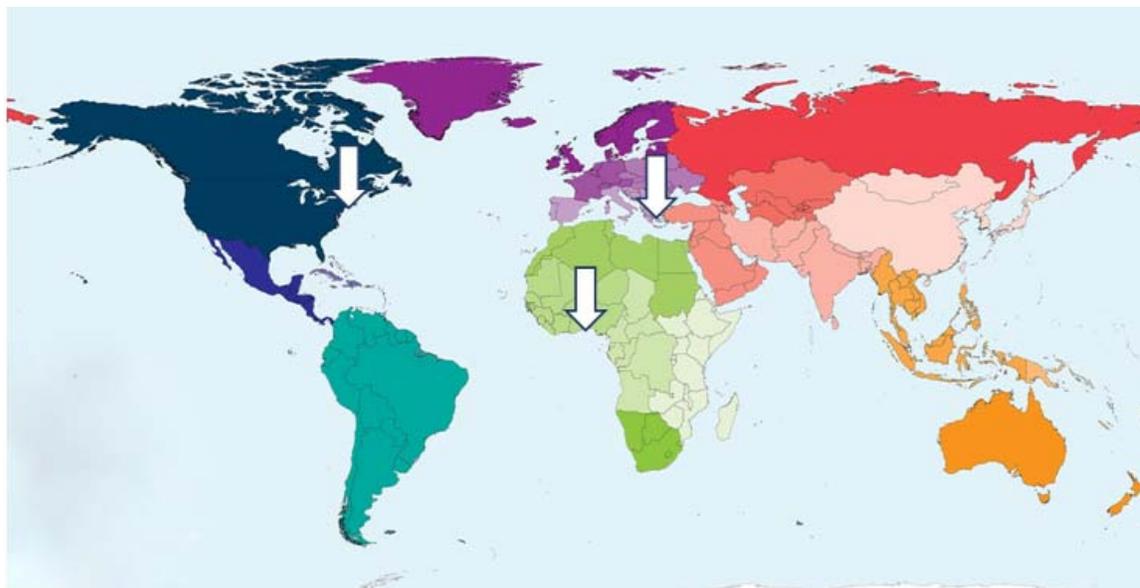
¹The drawing assignments were the same for all participants as it was a unit of study for the whole class that was part of the regular art curriculum. Therefore, no child was singled out or pulled out from any class requirements or activities.

²Two of the male participants from the Ghanaian cohort and one from the New York group were removed by lottery to balance the number of males and females.

³The teachers in this study are ordinary teachers in ordinary classrooms. They were virtually non-selected as they factored in by location of school and country.

the area of Molaos, Greece, and have done exchange art projects with schools and colleagues in Ghana, with whom I have also visited and maintained friendships through social media. And I conducted a pilot study in each of these regions. In addition, all three schools are specifically public schools for the purpose of continuity and because public

Figure 3.2. *World Map Showing Locations for Study*



schools characteristically are committed to students and community, have a diversified population that reflects the local area, and maintain a level of accountability due to being governmentally-supervised institutions.

The boxed descriptions below of my first impressions of each school are for the purpose of creating a sense of place for each site. The colored fill⁴ corresponds to each country and will be used in charts throughout this paper for consistency in indicating the country. The background information for each site is to provide historical and cultural context for each location.

⁴Color coding for countries in study: red= U.S.A., blue= Greece, green= Ghana

Mount Kisco, New York

A red brick school house with dormers pointing to the blue cumulus sky. Inside the neoclassical portico visitors are greeted at the security desk. Children's artwork is displayed all along the bright tiled corridor: the theme is a mentorship project between upper and lower grade students working in pairs. In the art room children sit around laminated tables in a long narrow room. This is a choice based classroom with canisters of markers, crayons, colored pencils at ready from labeled bins on stacked shelves. There is a check list held to each student's work place by a piece of cellophane tape. A boy wearing a Celtic football t-shirt looks to his teacher for approval.

The elementary school in Mount Kisco, New York, is part of the Bedford Hills school district and has a fairly diverse demographic of students in comparison to the other district schools of Pound Ridge, Bedford Village, and West Patent, which are more affluent. The district is unique. Mount Kisco, over the last ten years, has had a large influx of native Spanish-speaking children, and within the last five years began transitioning into a dual language school. At the time of this study, the dual language program was in place in the first-grade classes and kindergartens. Each new kindergarten class now enters into the dual language program.

The town of Mount Kisco, a suburb of New York City, was founded in 1850, after the arrival of the railroad. Since 1875, Mount Kisco has been an incorporated village under the Village Law of the State of New York. The name Kisco may be connected to the Munsee word for mud, *asiiskuw*, from the Eastern Algonquian language. The name Cisqua first appeared in colonial records as the name of a settlement and of a meadow and river mentioned in the September 6, 1700, Indian deed of land in the area (Grumet, 2013).

Molaos, Greece

Concrete steps climb up the steep incline to the school building, a yellow stucco building with aluminum windows and doors, below a hard blue sky.

A jigsaw puzzle-like mural stretches across the far wall of the schoolyard beyond the basketball courts.

The floor mat in the doorway, decorated with a meander design, opens onto a large airy classroom with a mosaic floor.

Children sit in groups of four at square composite board tables with metal legs that are arranged in one corner of the room.

An icon of Jesus looks down from the wall next to a map of the world.

Students quietly draw, their pencil cases lay open with drawing materials spilling out.

The Molaos Elementary school in Greece serves kindergarten through fifth grades. The school has existed in this location for approximately 80 years. The town of Molaos, first mentioned in the historical records of 1209, is named after the water mills operated using power generated by a river that once flowed down the mountain and through the center of the town. Following the Greek War of Independence in 1832, Molaos became a local administrative center. During the mid-20th century, the river bed was filled in and paved over to create the main thoroughfare that runs through the commercial district. Since Greece entered the European Union, the town of Molaos has been the seat of the municipality of Monemvasia.

This area of the southern Peloponnese is known as the region of Laconia, with the city of Sparta as its capital. There are many sites containing evidence of Neolithic settlement in southern Laconia. The word “laconic” derives from the Ancient Spartan reputation for a concise and coarse manner of speaking, which in many respects has carried over into the contemporary culture. During the Byzantine era, the fortified town of Mystras, just outside of Ancient Sparta, was the capital of the Byzantine Despotate of the Morea in the 14th and 15th centuries. The fortress of neighboring Monemvasia as well was a rich center of Byzantine culture and a powerful and strategic port with a history of invasion and occupation including by the Franks, Venetians, and Ottomans. The Castletown of Monemvasia once contained over 40 churches (Kalligas, 2013). The

cathedral of Christ Elkomenos in the center of the lower town of Monemvasia houses rare icons that are kept secure and protected in climate-controlled cases. The church of Agia Sophia, located in the upper town, was built in a style similar to the monastery of Daphni, Chios, a UNESCO world heritage site (UNESCO, n.d.).

Wadie Adwumakase, Ghana

The canopy of a teak tree casts shade on the cinder block school building set on fairly level ground against a spongy gray sky.

The floor is swept before class begins as is customary when expecting guests and the wooden shutters and weather worn doors of the school leave ample spaces for dust to enter.

All of the children wear uniforms and except for one, have their hair trimmed short. The students are seated in pairs at wooden desks arranged in rows. They are busily chatting. There is a blackboard at the front of the room and a table for the teacher with a bag of chalk.

Hanging up high on the back wall is a chart of animal illustrations next to a poster with “Avoid Casual Sex” handwritten in block letters.

When the teacher calls attention, all eyes gaze at her, without a murmur.

The Wadie Adwumakase Methodist Primary School is located in the town of Wadie Adwumakase, a suburb of the city Kumasi, center of the Asante Region in southwestern Ghana, and second only in size to the capital city of Accra. Having been without a king for nearly 80 years, the town has a chief who was recently also coronated King of Wadie Adwumakase. While visiting, I was given the title Queen of Educational Development, an honor and reflection of the king’s interest in educational advancements as well as the trend across the nation of Ghana. A coronation dress was made for me from Kente cloth that was woven by a local weaver, and an order was placed to have my name inscribed on a stool. The meaning of a royal stool is intertwined with the symbolic meaning of trees and explained below.

The name Kumasi comes from the Twi language meaning “under the palm tree.” The Kum tree, one of three originally planted by an Asante priest searching for a place to found a settlement for the Ashanti people, flourished, thus indicating the location choice,

then named Kumase. This sacred tree, called *ogyedua*, the tree of reception, or shade tree, was planted in the city center of every Asante vassal state to symbolically represent the royal rulers and their forefathers. Among the Asante, the destiny of each constituent nation was associated with the health of the tree of reception: spirits could cool down in the shade, and the deceased chief became associated with this tree (Muller, 2013). In addition, according to ethnographer Robert Rattray, any particularly large tree standing on its own may receive ritual attention because it is considered to house a god (Platvoet, 1982).

Data Sources

To attain as grounded and unbiased an understanding of the phenomena being investigated as possible, data collection for this study was varied to allow for a triangulated structure of analysis (Maxwell, 2013). The data sources for this investigation are: (a) drawings;(b) student commentary and questionnaire, teacher and parent questionnaires and correspondence; and (c) researcher field notes, memos, and journal.

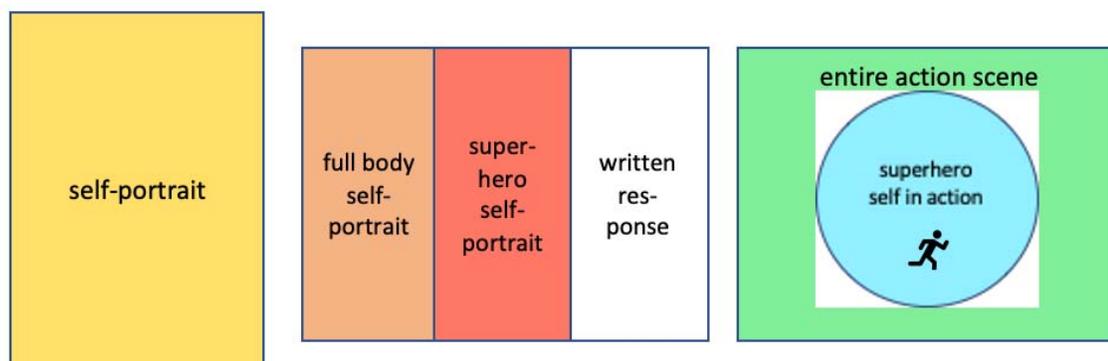
Drawings and Written Response

For this study, each child produced the same set of four drawings: a self-portrait from observation, a full body self-portrait from memory, a self-portrait of themselves transformed into a superhero using their imagination, and their superhero self in action. They produced the drawings over the course of three class meetings, each of 50 minutes, at their respective schools in the United States, Greece, and Ghana.⁵ The first drawing task was a self-portrait in pencil on 8½ x 11-inch paper made from observation, using a mirror. The aim of this task was to establish a graphic baseline in respect to the child's

⁵Four of the females from the Ghanaian cohort did not make a self-portrait, the first of the four drawing tasks. Based on the results of the drawing style profiles discussed in the data analysis section, and consultation with peers, the probability of the style of the missing self-portrait drawings is hypothesized based on data from the three other drawing tasks created by those four subjects.

development of observational drawing skills and the ability to render a subject from observation, as well as a means to compare the range of skills represented across the study by participants. The second and third drawing tasks were done on a letter-folded piece of 8½ x 11-inch paper in pencil and a choice of colored pencils, markers, or crayons. Subjects drew a full body self-portrait informed by memory in the left panel and the self as superhero using imagination to characterize themselves as a superhero of their own invention in the center panel. It was assumed that the subjects would apply their baseline skills from the first observational drawing task to representing themselves from memory in the second drawing and interpreting themselves as a superhero using their imagination in the third task. In the third panel of the letter fold (the right side), subjects also answered questions in writing: (1) What are your superhero powers?; (2) Why did you choose this costume?; (3) Where does your superhero live?; (4) How did you save the day?

Figure 3.3. *Illustration Representing the Four Drawing Tasks and Five Scoring Categories*



The third drawing task consisted of a complete whole page composition on 8½ x 11-inch drawing paper for which subjects used a choice of pencil, colored pencils, markers, and/or crayons to depict their super-hero-self intervening in a situation that requires their help. The superhero theme was designed to give children the opportunity to re-present themselves in an alter-ego self-transformation, creating a new identity in the

role of liberator or guardian. It was assumed that participants would adapt and apply baseline skills to portray movement and invent a setting in which the rescue scene could take place. In addition, it was anticipated that the subjects' choices in their visual narratives would indicate their personal values and aspects of character, hidden or present. At a fourth class meeting, the participants were given a questionnaire to complete.

Modes of Drawing: Observation, Memory, Imagination. There are three modes of drawing employed in the making of these drawings: observation, memory, and imagination. Each mode facilitates the participant's response to the task in a different manner because each provides a different means of entry into the creative process. We might think of the tasks as: self-portrait—*me as I am in the mirror*; full body self-portrait—*me as I remember myself*; superhero self-portrait—*me as I imagine myself being a superhero*; and superhero self in action—*the story of me as I picture myself helping others*. Influential factors to keep in mind moving into a discussion of style are the types and variety of drawing skills needed to complete each task.

- The self-portrait drawing was done from observation using a mirror. Drawing from observation challenges the ability to represent a 3-dimensional form on a 2-dimensional surface.
- Working without a mirror to draw the full self-portrait, participants had to recall their self-portrait drawing to draw the head, face, neck, and shoulders and combine this information with their mental visualization of the rest of the body.
- Drawing the superhero self-portrait required the use of a combination of skills; applying knowledge acquired in the previous tasks plus imagination to draw a transformation of the self into a superhero self.
- The superhero self in action drawing required use of all of the previous skills plus envisioning the body in motion.

- Drawing the entire action scene called upon the ability to draw a spatial representation of an imagined place with one or more additional figures included to dramatize the rescue.

Questionnaires

Students. The questionnaire was designed in three sections and focused on collecting data relating to the drawings made by the students. The sections included: Part I. About Art, which asked questions about their art and interest in art as a subject, activity, and pursuit, and about cultural influences outside school; Part II. About You asked questions about self-image and personal values as reflected in their depictions of personality characteristics/traits; Part III. Things You Like To Do asked questions about extracurricular activities, including time spent watching and using social media, playing video games, and the social connectivity associated with various media-based activities.

Teachers. The three art teachers who facilitated the study were each given a questionnaire to answer. The questions were organized into four sections and were designed to gather information about influences on the student participants' drawing and creative thinking. The sections included: Part I. General, which asked questions about family, educational background, and artistic pursuits; Part II. Educational System, which asked the teacher to critique their country-specific system of education, availability of resources and access to technology, and behavioral management system; Part III. Network of Influences asked about influences students encounter in school and in their daily lives; Part IV. Representation of the Human Form asked about the representation of the human figure in traditional and popular art forms in the specific country. During data analysis, the teachers were contacted by email and asked to further comment on questions pertaining to the types of drawing experiences their students had in school and outside of school: (1) What drawing assignments or projects were part of the curriculum they taught to the students in the study: Did they do drawings from imagination, observation,

memory, or other?; (2) Did students use drawing as part of instruction in any classes other than art in school?; (3) Did students have any drawing experiences or classes taken outside of school?

Parents. The questionnaire for parents asks questions similar to the questionnaire for students. It is arranged in three sections. The first section, About Art, asked about their art education and art-making experiences. The second section, About Your Child, asked for views on cultural influences and personality characteristics/traits of their child. The third section, About You, surveyed extracurricular activities and social connectivity associated with various media-based activities.

Researcher Field Notes, Memos, Journal

In preparation for this study, I did three pilot studies; one at my own school where I teach art in the Bronx, New York, during instructional hours, and the others at Molaos, Greece, and Agona, Ghana, in an extracurricular capacity. I kept researcher field notes on observations from these pilot studies as well as a journal of reflections. Descriptions and thoughts about my visits to the sites in this study were recorded as well in field notes. During the process of data collection and analysis, I documented observations and reflections on data revealed through coding, such as categories that emerged and contextual connections. I also transcribed the questionnaires (Maxwell, 2013).

Data Collection

Having implemented the study in their respective classrooms, the participating teachers mailed the student drawings and questionnaires to me and used email to return their own questionnaires. A folder including the four drawings and questionnaire was created for each participant. Each subject was assigned a number,⁶ and a master list of

⁶In the text as well, numbers are used in reference to participants rather than assigning pseudonyms because it seemed inappropriate to rename 72 children.

case information was kept in a separate and secure location. Numbers were assigned randomly, without regard to country or gender, so as to safeguard unbiased reporting by scorers when viewing the entire collection of drawings. During the course of the study, the teachers and I also corresponded by email and phone for clarification and inquiries that yielded additional information, a form of theoretical sampling to be discussed within the next section.

Data Analysis

Levels of Analysis

To examine networks of influence using an ecological systems approach meant “casting a wide net across micro, meso, and macro levels of analysis for this research” (Charmaz, 2014, p. 291). Macrolevel studies concentrate on groups of individuals, systems, structures, and processes, whereas microlevel analysis focuses on individual activities or behavior (Hantrais, 2009). Considering the impact these systems might have on the creative thinking and artistic processes of the individual students in this study, it was appropriate that examination of the resulting data be done through both a macrocosmic as well as a microcosmic lens. It is also key to bear in mind how the individual is situated within these systems in terms of the fluidity between levels and implicit interaction, “between a plurality of causal factors, on the basis that actors cannot be separated from structures and *vice versa*, since they are all socially constructed (Maurice, 1989)” (Hantrais 2009). Thus, meaning exists in the connectivity between people and texts, not within them (Ellinson, 2013, p. 421). The instruments for collecting data were designed in an effort to recognize the implications of how micro situations, meso contexts, and macro processes shape and are shaped by individual and collective meanings and actions (Charmaz, 2014).

Organization of Data

In addition to using multiple data collection methods, due to the subjective and contextual nature of the network of influences on children's creative and thinking processes, the data analysis integrated categorizing and connecting analyses with the intention of making connections among the data without losing the timbre of the original drawings and narratives. As I read and studied the data being gathered, I used open coding for an inductive analysis that was intended to be organic and mutable. Having identified and organized the broad areas of interest, of overarching trends and incongruities revealed through the open coding process, I then identified substantive and theoretical categories based upon the participants' visual, verbal, and written responses (Maxwell, 2013). Having coded and organized the data accordingly, I then investigated for connections across categories, using data from the interviews and transcripts to illuminate these connections and reorganize the information from which new thoughts and conclusions might be drawn, while preserving the individual voices of the participants and my colleagues in the United States, Greece, and Ghana.

Procedures

Scoring. To ensure validity, the drawings were scored by the researcher, as well as by three separate judges working independently. All of the scorers have extensive art teaching experience and knowledge of the artistic development of children. Each of the judges represented cultures from which the students came, thereby lending cultural validity to the scoring outcomes. Also, as discussed in Chapter II, understanding that drawing signs may carry different meaning across cultures was acknowledged by the scorers and furthermore that all symbolic references, whether from mainstream or popular culture, be given consideration when present. In addition, the researcher was in the fortunate position of having visited each of the schools prior to implementation of the research study.

Scorers. Particularly in qualitative research in which multiple coders are used to analyze data, “inquirers want an external check on the highly interpretive coding process,” known as intercoder agreement (Creswell, 2013, p. 253). The scorers, therefore, were given instructions to score only the criteria they saw present in the drawings and were trained by the researcher with a trial run using the protocol chart and a few drawings, after which inconsistencies and questions were discussed, and, where necessary, adjustments made to the scoring protocol or re-explanation of the instructions. In August 2017, the judges were provided with 72 sets of four drawings identified by number, and 72 scoring charts, one for every set of drawings made by each participant in the study. With scorers located both in the United States and Cyprus, an electronic document containing the protocol chart was exchanged through email and Drop Box. Completed scoring tables from the three judges were received by the researcher by the end of October.

Protocol Chart. The drawings were scored using a protocol chart. Validity of the scoring chart was established through prior pilot studies in all three locations and followed up by further discussion with peers in my doctoral cohort and my dissertation advisor. The protocol chart was designed with multiple items from which the scorers were asked to select the most appropriate item based on the drawing they were examining. Within each section scorers could score multiple items for each drawing within each of the scoring categories. The scoring chart was organized in terms of rows containing rubric criteria and five columns; the first three columns were each assigned to the first three drawings: self-portrait, full self-portrait, and superhero self-portrait. The fourth drawing of superhero in action was scored using two columns: in the fourth column for the superhero figure and in the fifth column for the entire action scene. The criteria for this first level of analysis were divided into three groups: first, drawing style and detail, in rows 1-5; then, composition of figure, in rows 6-13; and third, content, in

rows 14-23. The scoring criteria expanded across drawing tasks as the requirement for completion of the task changed from observational drawing to drawing from imagination.

Table 3.1. *Protocol Chart Used by Judges to Score Drawings Made by Research Subjects*

Set of drawings scoring rubric	self-portrait	full self-portrait (left side)	superhero-self (center)	superhero self (in action drawing)	action drawing in entirety
1. Schematic (using graphic symbols)					
2. Naturalistic (realistic representation)					
3. Mixed (schematic and naturalistic)					
4. detail: insignia					
5. OTHER					
6. Assured/Hesitant: A/H					
7. figure in proportion Y/N					
8. drawn in contour Y/N					
9. composed as parts Y/N					
10. Face/Body in profile F/B/FB					
11. detail-insignia: Memory/Observation/Imagination/Combo M/O/I/C					
12. Weapons or Gadgets W/G					
13. OTHER					
14. stick figures					
15. super/magical powers					
16. shows saving and helping people					
17. violence depicted					
18. use of symbolism, conventions, labels					
19. speech bubble/ text					
20. drawn in pencil and filled in with color					
21. drawn and retraced					
22. Action Localized/ Action Fills the page-touches edges AL/AF					
23. OTHER					

Therefore, the self-portrait (yellow) and full self-portrait (orange) were scored for drawing style and detail, in rows 1-5, the superhero self-portrait (red) and superhero-self in action (blue) scored for drawing style, detail, and composition, in rows 1-13; and the action drawing in entirety (green) scored for all the criteria including content rows 1-23. A chart of abbreviations was also created for the measures on the scoring rubric in figure 3.5. An additional space was available to the judges at the end of each of the three groups of criteria, at lines 5, 13, and 23 of the Protocol Chart, for commentary. These comments would prove useful, particularly in regard to description of details and the generation of additional data charts and general noticings.

Table 3.2. *Reference List of Abbreviations for Data Charts and Graphs***LIST OF ABBREVIATIONS FROM SCORING RUBRIC CRITERIA**

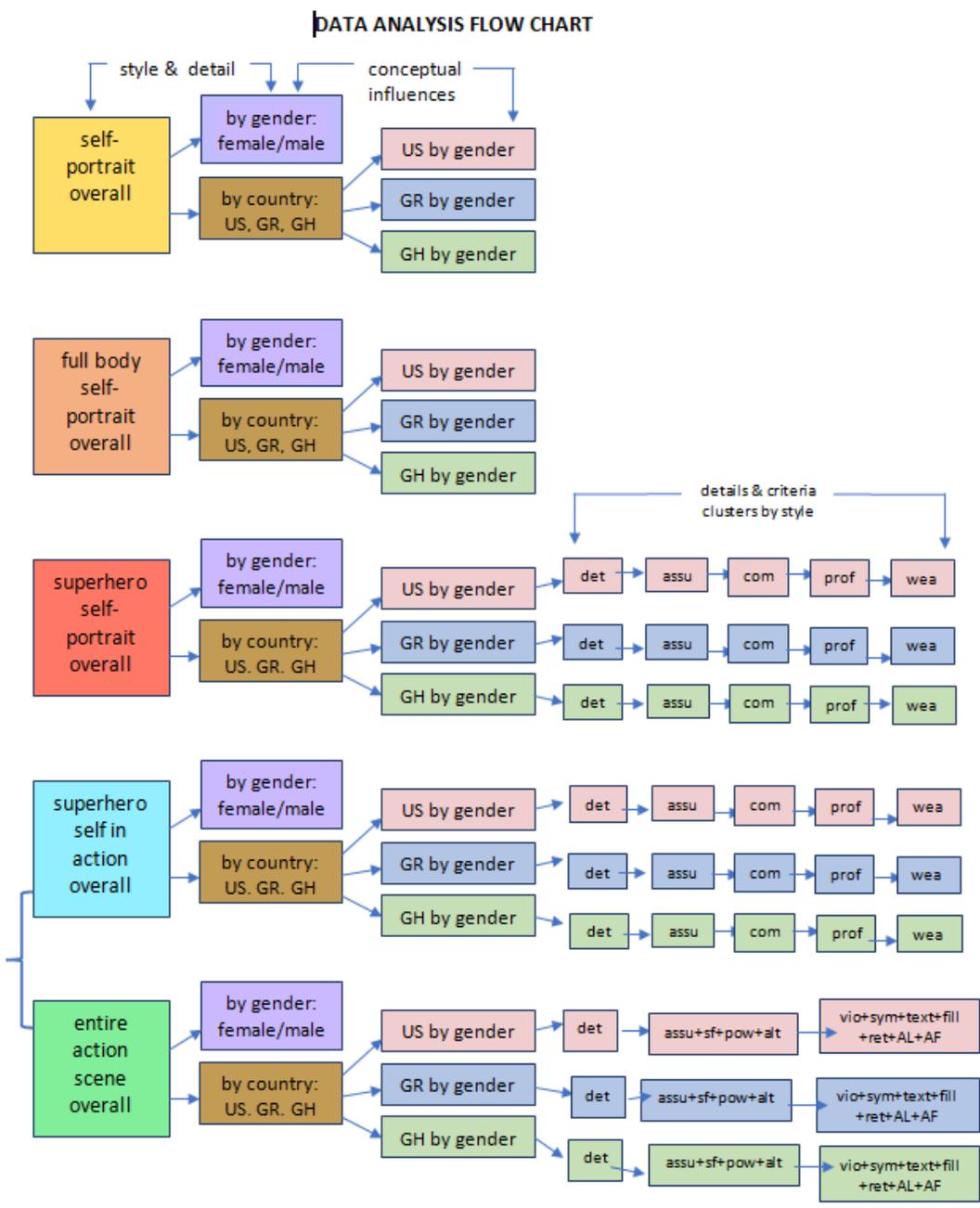
scoring rubric criteria	abbreviation
SELF-PORTRAIT, FULL SELF-PORTRAIT	
schematic (using graphic symbols)	SCH
naturalistic (realistic representation)	NAT
mixed (schematic and naturalistic)	MIX
detail: insignia	DET
SUPERHERO SELF-PORTRAIT, SUPERHERO SELF IN ACTION DRAWING	
Assured/Hesitant: A/H	A/H
figure in proportion Y/N	PROP
drawn in contour Y/N	CON
composed as parts Y/N	PART
Face/Body in profile F/B/FB	PROF
detail-insignia: Memory/Observation/Imagination/Combo M/O/I/C	M/O/I/C
Weapons or Gadgets W/G	W/G
ACTION DRAWING	
stick figures	SF
super/magical powers	POW
shows saving and helping people	ALT
violence depicted	VIO
use of symbolism, conventions, labels	SYM
speech bubble/ text	TEXT
drawn in pencil and filled in with color	FILL
drawn and retraced	RET
Action Localized/ Action Fills the page-touches edges AL/AF	AL/AF

Master Frequency Count. Data were organized with regard to a frequency count made from the responses of the three scorers. With a potential maximum score of three for each item on the protocol chart indicating all judges were in agreement, items with two or three check marks were kept. Items with a score of 1 were deemed not robust and therefore extracted.⁷ Based on this count, a master scoring table was assembled for analysis. Data from the master scoring table and a case file for each participant were input into a qualitative analysis software program. Using the program, data were then

⁷Raw scores from frequency counts are recorded in Integrity charts displayed in Appendix D.

collated by drawing task, gender, and country, and the results charted. As the scoring criteria expanded across drawing tasks (see Figure 3.4), additional charts and graphs were used to represent the data as illustrated in Table 3.3, the Data Analysis Flow Chart.

Figure 3.4. Data Analysis Flow Chart of Charts and Graphs Made from Master Frequency Count



In addition, during the course of graphing the frequency count results, cross-case comparisons revealed a relationship between inclusion or exclusion of details and drawing style used by participants. Therefore, data results for drawing styles in terms of presence of details are charted for all five scoring categories. Also, significant scoring criteria, such as whether the drawing was executed with assurance or hesitance, the face/body were drawn in profile, and the figure drawn in proportion, were also collated in connection with drawing style and charted for the superhero self-portrait, superhero self in action, and the entire action scene.

Style Profiles

Recognizing that results of significance began with the drawing style used by each subject, a drawing style profile was assigned to each participant using the scores received by each subject for their set of drawings for either schematic, naturalistic, or mixed drawing style (see #1-3 Figure 3.5. Protocol chart) under each of the five headings: self-portrait, full body self-portrait, superhero self-portrait, superhero self in action, and entire action scene.

Interestingly, subjects did not all maintain the same drawing style across tasks, so subjects with identical sets of style scores were grouped together into discrete profile groups using S for schematic, M for mixed, and N for naturalistic. From this organization emerged three main style profile groups: MMMMM, SSSSS, MSSSS and 13 smaller groups. For example, a style profile MMMMM denotes the participant was scored mixed drawing style (M) across all five categories on the protocol chart. One of the most intriguing questions that emerged from the results is what were the influences or set of circumstances that supported a consistency in the style used across tasks or brought about shifts in style from one task to another. In the search for causes that may have affected variations in style, all of the following charts, once established (details classification,

facial comments, features and figure charts, and the matrix chart), were organized and reorganized not only by gender and culture but by style profile as well.

Details Classification

The significance of details in the drawings prompted the researcher to design a data chart expressly for details incorporated in the drawings using notes about details made by the judges and herself on the scoring sheets (see Table 3.3). Details were then sorted out by type to arrive at the following categories: cultural, clothing, facial, guideline, hairstyle, insignia, label, other, speech bubble, symbolism. A chart with an entry for each participant and type of drawing (listed in rows), with subcategories of details (catalogued in columns), was created. This information was input into the data analysis software program. The general results were charted overall and by established drawing style profiles.

Table 3.3. Details Data Chart for Cataloguing Details Included in Each Participant's Drawings

	S/N/M drawing style	details: clothing	details: insignia	details: jewelry, accessory	details: hairstyle	detail: labeling / speech bubbles/text	detail: symbolism/ convention	detail: traced using ruler or template	detail reflects cultural influence	detail: other
participant										
self-portrait										
full body self-portrait										
superhero self-portrait										
superhero self in action										
entire action scene										

Facial Comments Chart

Having explored links between drawing style and various scoring criteria from the master frequency count, and having examined trends among style profiles for participants, a significant amount of scores for facial detail led to charting and coding just

the detail commentary gathered from the judges' score sheet and researcher memos for facial features, and was cross-referenced by drawing style profile (DSP) (see Table 3.4).

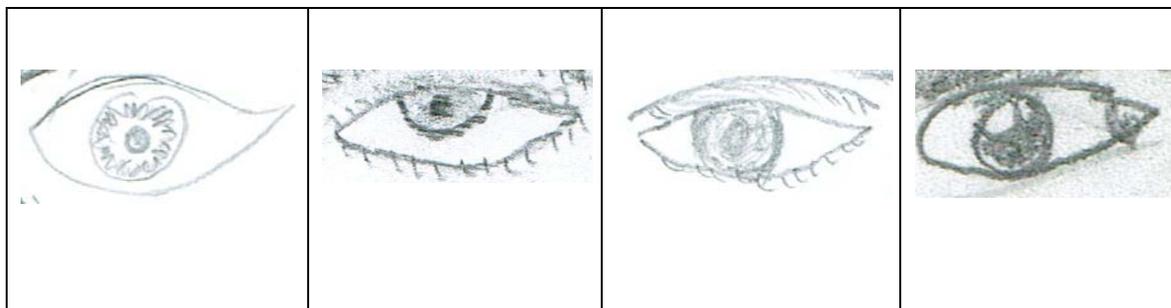
Table 3.4. *Example of Facial Comments Chart*

participant	drawing style	self-portrait	full self-portrait	super self-portrait	super-self in action	action in entirety
1)	MMMMM		triangle nose, line smiley mouth			
2)	MMMMM					
3)	MMMMM		big ears	big ears	rectangular nose	villain has triangular nose
4)	MMMMM	small angle nose				
5)	MMMMM		round eyes, triangle nose	round eyes, triangle nose	round eyes, triangle nose, features are hollow	

Features and Figure Charts

As patterns emerged linking specific commentary, such as round head or triangle nose, with a specific style profile, a visual catalogue was made for each facial feature: eye, nose, mouth, organized by style profile (see Figure 3.5). How the neck was drawn, for example, among other details such as frontal view or use of profile led to an additional image catalogue of every subject's superhero self in action. Connections revealed by comparing and contrasting the features and figures within each style group will be discussed with the results.

Figure 3.5. *Example of Features and Figures Charts: Naturalistic Style Eyes*



Matrix Coding: Details, Student Commentary and Questionnaire

Having collated the scores from the frequency counts and catalogued the resulting data by drawing task and gender, country, detail, and drawing style, a final scoring chart was developed to search out connections between subject's commentary and responses to the questionnaire and the visual data (see Table 3.5). An entry for each subject included the details scored in the detail data chart, the written comments made after the third drawing task on the letter-fold paper, and the responses to the questionnaire condensed under three topics: regard for art, self-image, and extracurricular activities. The purpose of this matrix chart was to establish a link, if any, between children's sense of self and their drawing. Data on number of users and time spent on media devices (TV, Internet, cell phone, social media, video games) as reported in the questionnaire was charted according to overall, gender, and country results.

Table 3.5. *Matrix Chart*

participant	detail	1) super powers	A) regard for art
self			
full self		2) costume	B) self-image
super self			
action self		3) saving act/*residence	C) extracurricular activities
action			

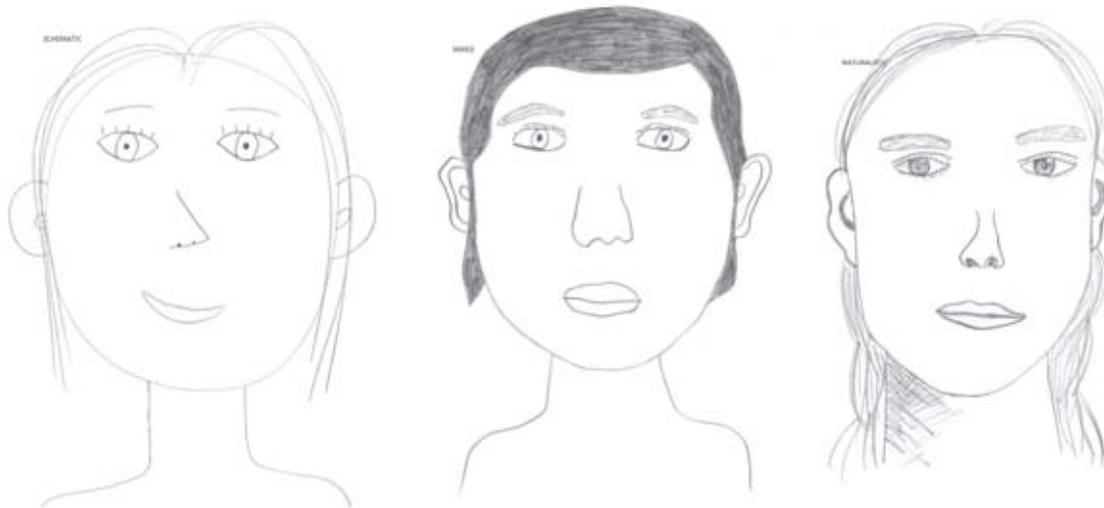
Theoretical Sampling

Theoretical sampling is a technique used in the process of developing theory. Charmaz (2014) defines theory “as either explaining the relationships between concepts or offering an abstract understanding of them” (p. 300). Using a grounded theory approach, sampling is done once inductive categories have been established in the course of data analysis (Patton, 2002). In this study, as trends in the data emerged for style and details on both individual and group levels, the teachers in the study were asked for their input/opinion about possible reasons for these phenomena. Their responses were conveyed through email communication.

Drawing Styles

In the course of the study the observation drawing task emerged as a baseline for “reading” drawing tasks two, three, and four. This was because the scoring for style was based upon how much of the observation drawing appeared to be drawn from close and nuanced observation of the face in the mirror, and how much was drawn using schemas. For example, the drawings classified as “naturalistic” appeared to be drawn from faithful observation of the face in the mirror, those using simple descriptive forms such as a triangle to represent the nose were classified as “schematic,” and those drawings that combined both styles were classified as “mixed.” Thus, the first drawing task served as a baseline for determining the style or level of compositional complexity among subjects that set the classification of drawings for the study. A description of the general characteristics associated with each drawing style (schematic, mixed, naturalistic) follows Figure 3.6 of generic renderings for each drawing style.

Figure 3.6. *Generic Renderings for Each Drawing Style: Schematic, Mixed, Naturalistic*



Definition of Schematic. A schematic, or schematic diagram, is a representation of the elements of a system using abstract, graphic symbols rather than realistic pictures. The schematic self-portraits have qualities that set them apart from the naturalistic and

mixed drawings, such as the shape of the head being round or oblong, not oval. Mostly, the nose is triangular, rectangular, or only a line for the bottom contour. Eyes are oval or lens shaped. Most have no eyelid, pupil is not filled in, eyelashes only on top. The eyebrows are a straight or arched line, some filled in. Ears sticking out of sides of head, many with a curved line or spiral in the middle. The hair is generally done in quick strokes, the females have hair originating from a hair part in the middle and cascading down either side of the head in arches; some are filled in. The males also used stroke marks for hair on the top of the head and down to ears and sometimes filled in. There is no neck or it is too narrow, drawn with two straight lines down or veering off on a slight angle; some include rounded shoulders.

Definition of Mixed. The mixed style is a combination of naturalistic and schematic features. The mixed self-portraits appear more closely drawn from observation and share common traits. For instance, the shape of the face is drawn as more of an oval, and they are more articulate than the schematic self-portraits, especially in describing the shape of chin. Nearly all of the eyes are of a modified lens shape, some have eyelids, about half have eyelashes, and many of the pupils have shading. Most noses are depicted with two nostrils but are not shaded. The mouth is drawn showing two distinct lips but without shading. The shape of most eyebrows is drawn and filled with individual hairs. The outside shape of the ears is drawn carefully with some attempted description of the inside. Hair covers part of the forehead rather than sitting on top of the head. Necks are mostly too narrow, either straight or angled and curved into shoulders that are also too narrow.

Definition of Naturalistic. The naturalistic self-portraits have qualities that set them apart from the mixed and schematic drawings. The head is slightly turned in two out of three of the self-portraits. The contour of the face is nuanced to show the shape of the cheeks and chin. The facial features are in relatively correct proportion and in proper placement within the face as drawn. There is limited use of shading to indicate light and

dark and very little to describe volume. The frontal view of the face includes clearly ovoid shaped eyes with shading being used for the pupils and irises to show reflected light. The eyebrows are descriptively drawn and filled in with pencil strokes marking out individual hairs. The nose is depicted with a bridge, and the nostrils are shaded. The mouth is drawn articulating two lips using some shading to show volume, and one portrait articulates the teeth as well. In each case the neck is drawn as a volumetric form that widens toward the bottom, upholding the head, and in two instances showing the collar of a t-shirt. Carefully styled hair is positioned on top of the head. The ears are thoughtfully drawn illustrating anatomical details.

Part III: Art Education and Representation of the Human Figure in the United States, Greece, and Ghana

The third part of this chapter reviews contemporary art education pedagogies, curricular approaches, and the representation of the human figure in the United States, Greece, and Ghana. Information is provided in this section to offer a more complete picture of the local and media influences that impact children's drawing in these locations. Public school culture is largely a product of prevailing national curricula and pedagogical trends reflected in the educational practices of school administrators and educators at a local level. In addition, representation of the human figure is at the core of the instruments created for this investigation and the theme of the drawings. Therefore, an awareness of the visual cultural currents surrounding the depiction of the human form in these locales is critical to understanding the impact of local and media influences on children's drawings from observation, memory, and imagination in this study.

United States: Art Education

At the beginning of the 19th century, art education still held European art and scientific philosophy as the standards of excellence, although public school or Common

school art did not emphasize the human figure. The Romantic movement and American transcendentalism brought self-expression and morality to the cultural center, with a focus upon nature, art, and beauty as sources of spiritual truth (Efland, 1990). With the onset of the 20th century, industrial arts separated from art education into vocational education, and with it went the utilitarian rationale for teaching art in schools (Efland, 1990). Art teachers advocated for art education in schools to develop “an appreciation of art and natural beauty” (p. 185). Expressionism and the art world’s interest in “primitive” art resulted in a child-centered, noninterventionist art education pedagogy. After World War II, the influx of immigrants from Europe brought the modernist style of painting to the United States, and the abstract expressionist movement emerged in the 1950s (Efland, 1990). Lowenfeld and Brittain’s (1982) influential pedagogy for art education continued to emphasize a non-invasive approach to art education that views influence as detrimental. In 1984, the Getty Center for Education recommended DBAE (Discipline Based Art Education) developed specifically for K-12 education, an approach that attempts to make art instruction parallel academic instruction in aesthetics and art history and anchors studio study in acquisition of technique. Current art education practices, a reflection of the multi-faceted, interactive and experiential trends in the art world, embraces and balances a broad range of approaches and awareness, with an emphasis on the teaching of skills, and art teacher professional development. Yet, methods such as the laissez-faire approach, especially for young children, as well as overly prescriptive systems such as Visual Thinking Skills (VTS) introduced in 1995, retain a stronghold in many art education programs across the country.

United States: Human Figure

The United States does not have its own longstanding tradition of figurative art per se. For today’s youth, the human figure dominates popular culture in music, fashion, and sports and carries a message of self-acceptance by taking ownership of one’s image,

while at the same time promoting the objectification of oneself in a form of personal branding. Cultural studies scholar John Storey's (2003) description of Western culture trends since the 1960s is helpful to understanding the environment in which children today absorb, synthesize, and create new culture. During the past 50 years of the postmodern era, the evolution of culture industries and electronic media has blurred the boundary once enforced between high (elite) and popular culture (Storey, 2003). As a result, popular culture in contemporary Western societies has been described as "an ambivalent organism of authenticity and commodification, of shared values and economic interest, of human agency and dominant ideas" (Ivashevic, 2009, p. 53).

Greece: Art Education

In the history of modern Greece, there are three periods, and corresponding models, of education. The first period began in 1834, shortly after the foundation of the modern Greek state. Education was not standardized and although arts courses such as "vocal and ecclesiastic music" and "sketching" were prescribed, they were "frequently not taught at all (Lefas, 1942)" (Sotiropoulou-Zimpala et al., 2015). The second period began in 1933, when educational pedagogy was influenced by German educational models and an attempt was made to unify the educational system. Following WWII, the Civil War, and the Military Junta, there were some, but not consistent, steps taken to acquire a more progressive orientation; however, education was closely and strictly controlled by the state and remained classicistic, moralistic, and nationalistic in tone and content. The arts courses until the 1980s dealt with very specific areas of music (singing, instruments) and the visual arts (calligraphy, sketching, and crafts). At the end of this period, some curricula began to include lessons in folk studies and demotic dances. In addition, "while arts education was reinforced in more developed countries, being considered a means for developing taste among the masses, in Greece arts education was seen as not necessary and frequently not implemented (Stavrou, 2009)" (Sotiropoulou-

Zimpala et al., 2015). Beginning in 1983, the third period of educational reform in Greece started with the establishment of the first university department of education. Even with tremendous changes in teacher education and training, “it was clear that arts courses were not being brought up to the standards (Antoniou, 2002)” of other educational programs as indicated by art courses in the 1990s being referred to as “activity courses” (Sotiropoulou-Zimpala et al., 2015).

Art in Greek primary schools is a compulsory subject customarily taught by general education teachers with limited art training usually received during a teacher certification course of study. From 1985 until 2003, teachers relied upon the *Teacher’s Guidebook for Aesthetic Education*, a practical textbook, much like a book of recipes, which resulted in the majority of Greek teachers concentrating on two-dimensional work such as drawing, painting, construction with paper and wood, and collage, because these materials are relatively available and easily managed in the classroom.

A new national curriculum was introduced in 2003 that emphasized “both “interdisciplinarity” and “cross-thematic integration” and sought to move the pedagogical approach away from teacher-centeredness (Alahiotis, 2002a, 2002b; Matsagouras, 2002; Panagakos 2002)” (Christopoulou, 2008, p. 5). This new curriculum consisted of two parts: a Cross-Curricular/Thematic Framework (CCTF); and Individual Subject Curricula (ISC), one for each school subject. However, the new curriculum tended to be restrictive, focusing on compartmentalized lesson topics such as family and community life rather than on overarching concepts to be explored or encouraging creative lesson planning. “The CCTF/ISC also introduced the Flexible Zone, which is known for educational projects that promote cross-thematic teaching (Alahiotis, 2002a),” but without ample time allotted in the curriculum for comprehensive study (Christopoulou, 2008, p. 5).

In 2007, the Pedagogical Institute published and distributed student textbooks intended to assist primary school teachers in delivering the CCTF curriculum. This new art teaching resource continues to emphasize art activities such as drawing, painting,

collage, paper and wood construction, clay, printing and mask-making, with how-to instructions provided as well as examples of children's artwork. The content of the art history portion, reserved for upper grades only, is Eurocentric, centered upon Western art movements, from realism and expressionism to pop art and *arte povera*, and the majority of artists studied are Greek, European, or American. It contains only cursory mention of commercial art, comics and graphic design, or art from other cultures (Christopoulou, 2008).

Greece: Human Figure

There is a strong figurative tradition in Greek art, mainly in sculpture from Ancient Greece, including archaic, classical, and Hellenistic periods and the iconography of the Byzantine Empire, of which the Cretan school is the most emblematic. The dialectical progression and development of the human figure throughout the history of Greek art generally reflects the philosophical, moral, and spiritual evolution of the Greek body politic and religion. Today, Greek popular culture at once celebrates, deconstructs, and critiques its artistic legacy, which remains central to the cultural traditions of the Greek people.

Ghana: Art Education

The concept of school as a formal educational system was introduced into Ghana by Europeans, with the ostensible exclusion of the arts because of the obvious connection to the indigenous culture they, mainly Christian missionaries, were seeking to eradicate. The missionaries viewed the indigenous culture and religion as primitive, fetishistic, and pagan. Unlike the traditional apprenticeship system, under which the youth learned from masters, the School Visual Art Education, added to the curriculum in 1908, promoted practical industrial training (Edusei, 2004). A similarity can be drawn here between the School Visual Art Education introduced in Ghana and the Common School Art in 19th century America, with its emphasis on moral education as a means of facilitating

immigrant assimilation. Arts instruction was referred to by the British expression “hand and eye” training, which was aimed at developing hand-eye coordination through copying exercises.

Since attaining independence from British colonial administration, Ghanaians have been faced with the problem of how to break away from the colonial legacy of an educational system that pays little or no attention to the social and cultural environment of Ghana. Today, art education in Ghana is more visible at the collegiate level, where pedagogy endeavors to move beyond being decolonialized to focus on how to get students to critically think and grow (Diallo, 2017). At the primary school level, even though visual arts, called vocations, are listed in syllabuses and include pottery, textiles, basketry, sculpture, leatherwork, bookcraft, graphics, picture-making, calabash art, beadmaking, sewing, and catering, most schools do not have trained art teachers. In 2000, a call was being made by art educators in Ghana, in an effort to revive Ghanaian culture, for a collaboration between educational planners, the government, and the National Commission on Culture (Flolu, 2000). Currently, educators in Ghana continue to point out the residual evidence of colonialism in the school arts curriculum, where art education is given less serious attention than other educational subjects and prospects for art careers are limited to supporting “tourism and preservation of indigenous heritages in the arts (Annku & Flolu 2012; GoG 2004)” (Opoku-Bons et al., 2017).

Ghana: Human Figure

The portrayal of the human body in African art is rich and vast, with the Asante ceramic memorial portraits and Akua’ba figures representing some of Africa’s greatest achievements in the art world. Akan women sculptors have created commemorative ceramic heads and at times complete figures in commemoration of deceased royalty and persons of status. Along with other examples of African portraiture, these idealized

statues are designed to convey individuality through characteristics such as scarification and hairstyle (Clarke, 2006).

Akua'ba figures were important fertility aids among Akan-speakers in Ghana in the past and were created in wood by male carvers. These sculptures depict a highly abstracted and idealized woman in the prime of life. In fact, African art almost always depicts figures in their prime (Klemm, 2016). The art of the Asante people of Ghana also includes a rich textile tradition such as Kente cloth, as well as royal golden stools, and linguist staffs.

The Ghanaian government's endorsement for Ghanaians to embrace contemporary culture through a celebration of cultural traditions is evident in television programs that include evangelical sermonizing contests and beauty contests that celebrate talents and accomplishments related to upholding traditional Ghanaian art forms.

Summary

In three parts, this chapter presented the basis and theoretical underpinnings of this inquiry, the processes undertaken to develop instruments, and the methodological rationale employed to gather and analyze the research data. To further support an understanding of the sites, participants, and local, social, material, and school culture, the third section set forth an overview of the art education pedagogies and forms of human figurative representation at the study sites in the United States, Greece, and Ghana. In the following chapter the data are presented.

Chapter IV

PRESENTATION OF THE DATA

Introduction

This chapter reports the findings of a research study involving 72 subjects ages 9-12 from three different cultures (United States, Greece, Ghana), based on four drawing tasks focusing on images of self. The study explores the influences that shape the drawing and thinking of the fifth grade subjects as they explore three different versions of self: (1) self-portrait (bust) from observation, (2) full body self-portrait from memory, (3) self as superhero from imagination, and (4) imagined superhero self in action. The study examines a set of four drawings made by each participant using a scoring protocol designed to capture: stylistic characteristics, graphic details, composition of figures, and elements of content. Based on a simple frequency count, data were condensed and used to compile a qualitative analysis revealing patterns that suggest both the overall nature of the drawings and a comparison of the drawings set within the three different cultural contexts.

Presentation of Findings

The data from this study will be presented as narrative using diagrams, charts, and graphs to depict the results and images of drawings to illustrate specific points. Categorical data are represented by bar graphs, and pie charts illustrate numerical

proportion.¹ Examples of charts and matrices are available in the appendices for reference. Table 4.1 provides a reference list of codes for data charts and graphs created from the master frequency count. The flow chart in Figure 4.1 maps out the charts of data sets presented in the Results section of this chapter for the five scoring categories based on the master frequency count table assembled for analysis from the judges' scores.

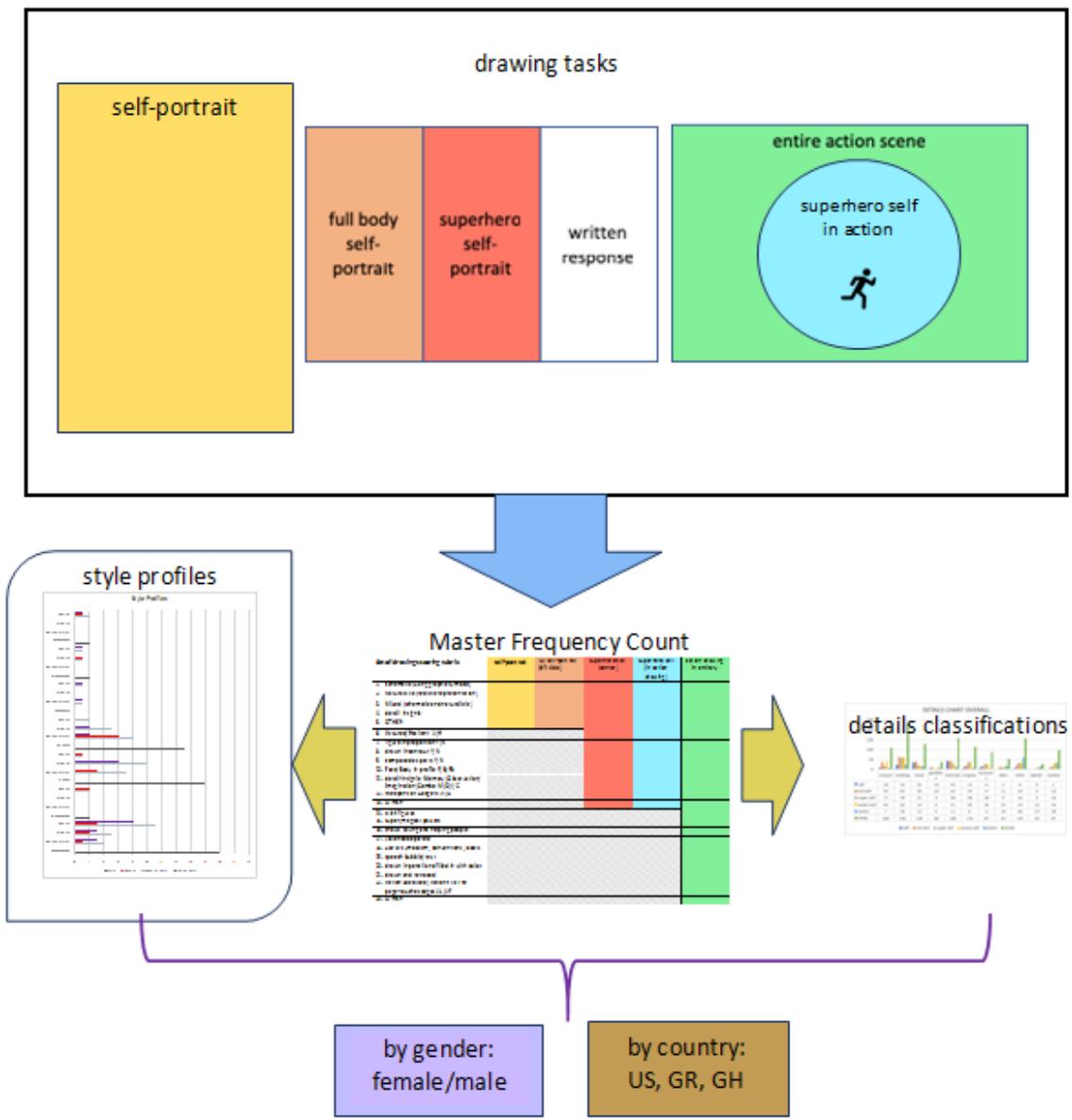
Table 4.1. *Reference List of Abbreviations for Data Charts and Graphs*

LIST OF ABBREVIATIONS FROM SCORING RUBRIC CRITERIA

scoring rubric criteria	abbreviation
SELF-PORTRAIT, FULL SELF-PORTRAIT	
schematic (using graphic symbols)	SCH
naturalistic (realistic representation)	NAT
mixed (schematic and naturalistic)	MIX
detail: insignia	DET
SUPERHERO SELF-PORTRAIT, SUPERHERO SELF IN ACTION DRAWING	
Assured/Hesitant: A/H	A/H
figure in proportion Y/N	PROP
drawn in contour Y/N	CON
composed as parts Y/N	PART
Face/Body in profile F/B/FB	PROF
detail-insignia: Memory/Observation/Imagination/Combo M/O/I/C	M/O/I/C
Weapons or Gadgets W/G	W/G
ACTION DRAWING	
stick figures	SF
super/magical powers	POW
shows saving and helping people	ALT
violence depicted	VIO
use of symbolism, conventions, labels	SYM
speech bubble/ text	TEXT
drawn in pencil and filled in with color	FILL
drawn and retraced	RET
Action Localized/ Action Fills the page-touches edges AL/AF	AL/AF

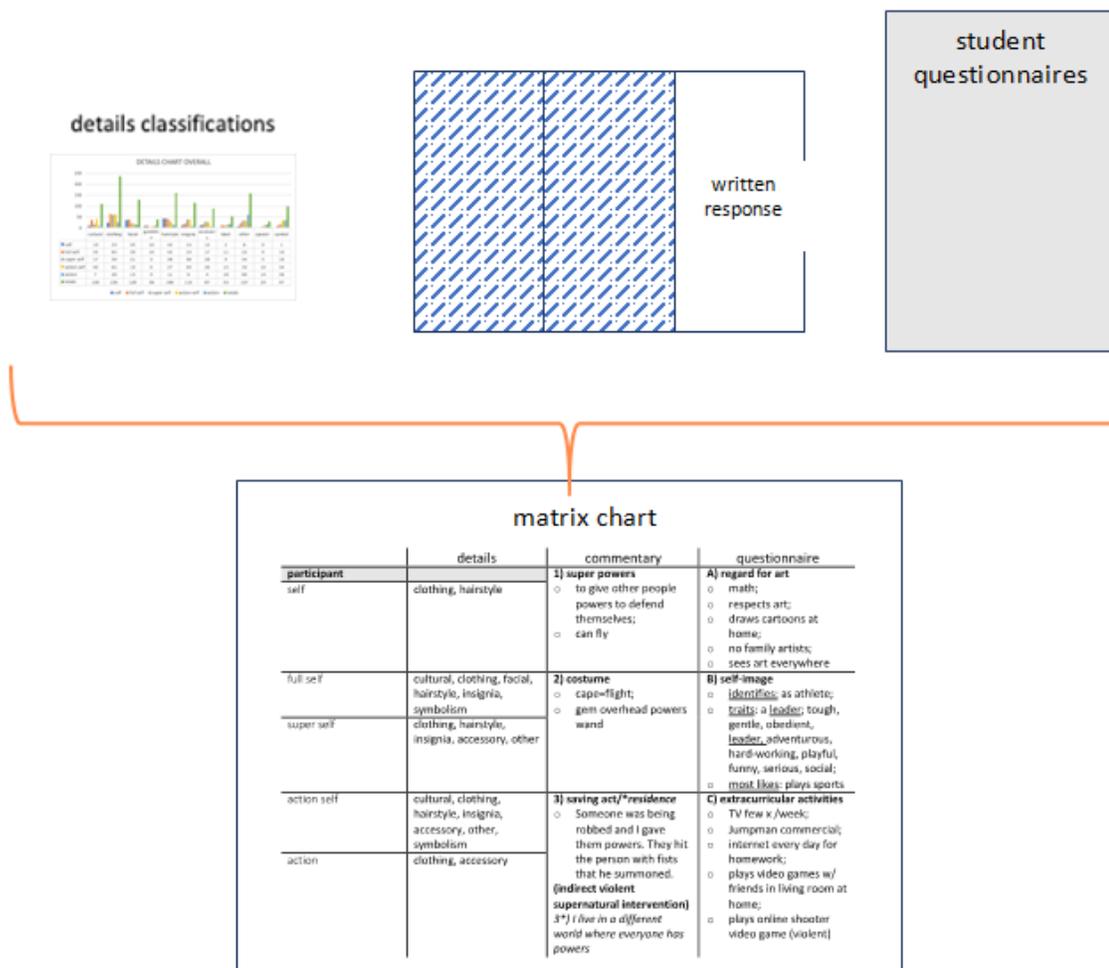
¹Pie charts present percentages of overall results for each of the five scoring categories otherwise all results are presented in bar graphs of raw numbers.

Figure 4.1. Flow Chart of Data Sources and Forms



(continued on following page)

Figure 4.1 (continued)



Introduction to Results

The outcomes of this study were arrived at through a selective process of organizing and reorganizing data guided by patterns and relationships that emerged through contrast and comparison. Out of 72 drawings made by the participants, style and detail emerged as defining issues modified by conceptual influences of gender and country.

Part I: Style and Detail

Self-Portrait

The self-portraits from observation were done in pencil on 8½ x 11-inch paper using a mirror and were scored for drawing style and details. The general results show that 28% (20) of the subject group drew in a schematic style, 67% of the subjects (48) combined schematic and naturalistic styles (mixed), and 5% of subjects (4) drew in a naturalistic style. Details such as insignia on clothing, hairstyles, and accessories were included in 40% (29) of the self-portrait drawings overall. Sixty percent (43) of the participants did not include details in their self-portrait drawing (see Figure 4.2).

Figure 4.2. *Self-Portrait Results Overall*

A

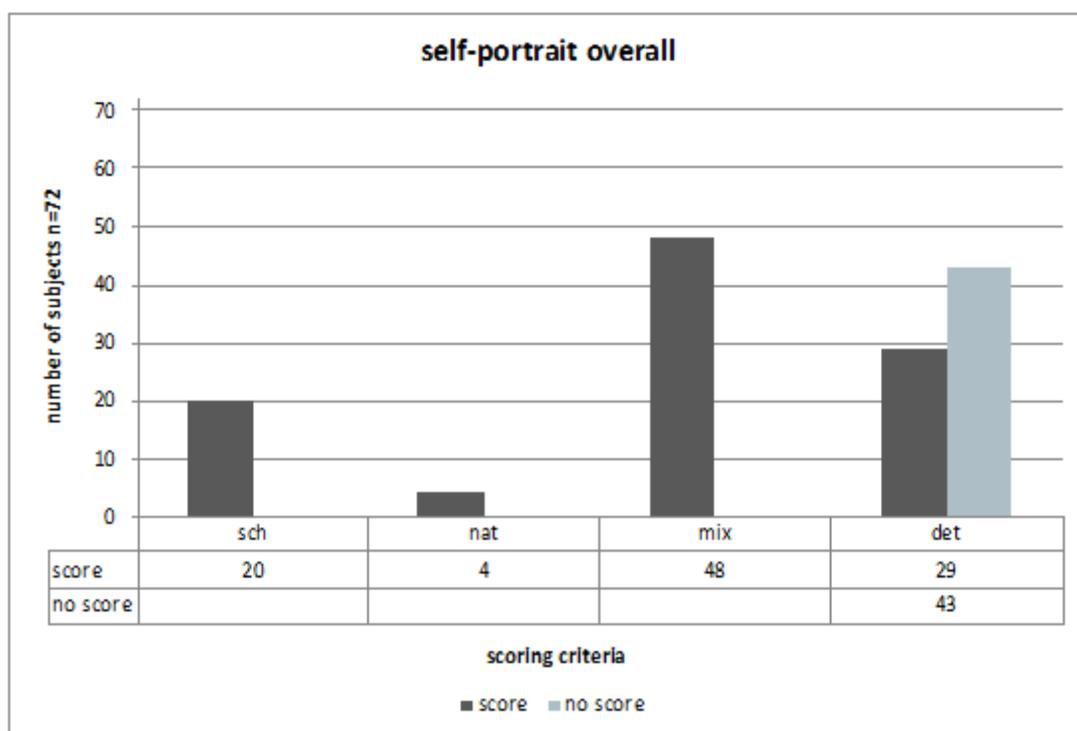
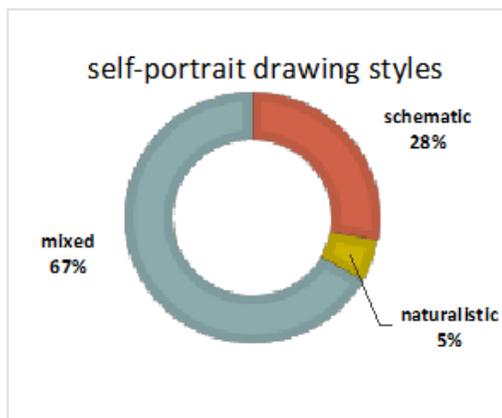
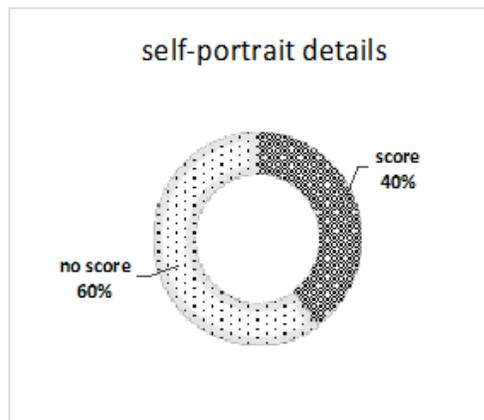


Figure 4.2 (continued)

B



C



Note. Figure 4.2 contains overall self-portrait results in three panels. Panel A: Bar graph of raw numbers. Panel B: Pie chart of self-portrait drawing styles in percentages. Panel C: Pie chart of self-portrait details in percentages.

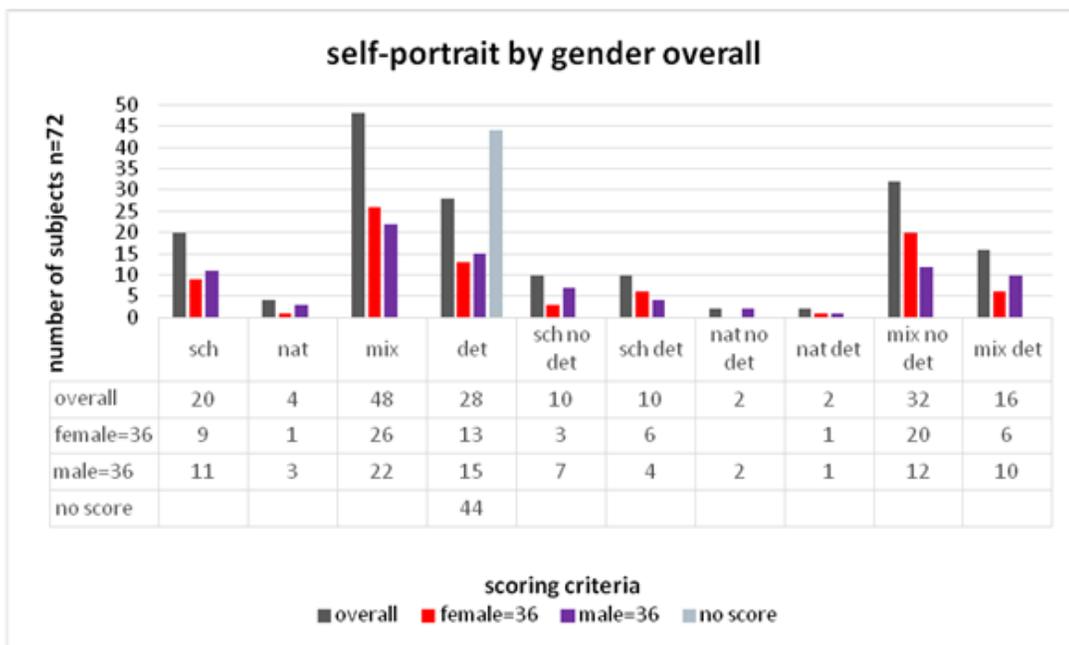
By Gender

By gender, 25% of females used a schematic drawing style, 72% used a mixed approach, and 3% used a naturalistic style to draw their self-portrait. Similarly, 31% of males drew schematically, 61% used a mixed style, and 8% drew a naturalistic self-portrait (see Figure 4.3).

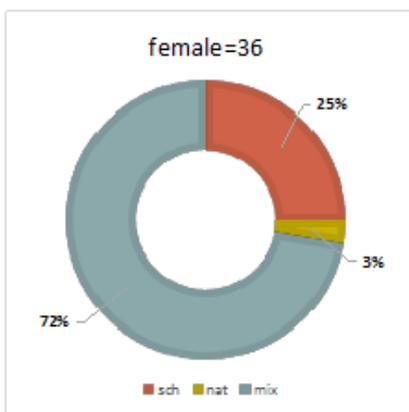
Close in number, more males (11) than females (9) made schematic self-portraits, whereas more females (26) than males (22) did mixed style self-portraits. Three males and one female drew a naturalistic self-portrait. Less than half (39%) of the participants added details. Of those subjects that did, more males (15) than females (13) added details to their self-portrait drawing. Broken down further, of those using a schematic drawing style (20), more females (6) than males (4) added details whereas of those using a mixed style of drawing (48) nearly double the number of male subjects (10) added details to their self-portrait than females (6) did as indicated in the chart below. In addition, one female and one male added details to their naturalistic portrait.

Figure 4.3. Overall Self-Portrait Results by Gender

A



B



C

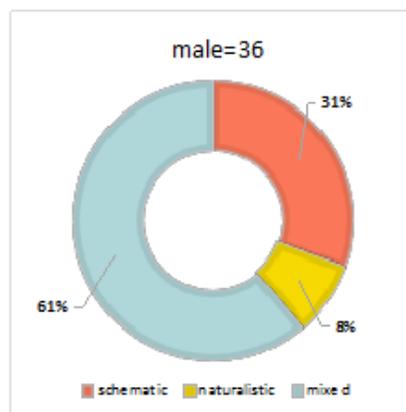
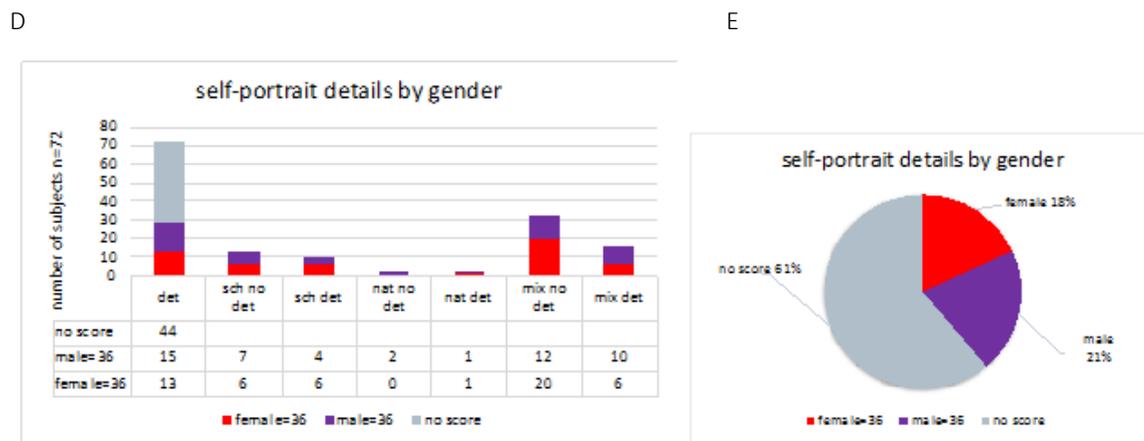


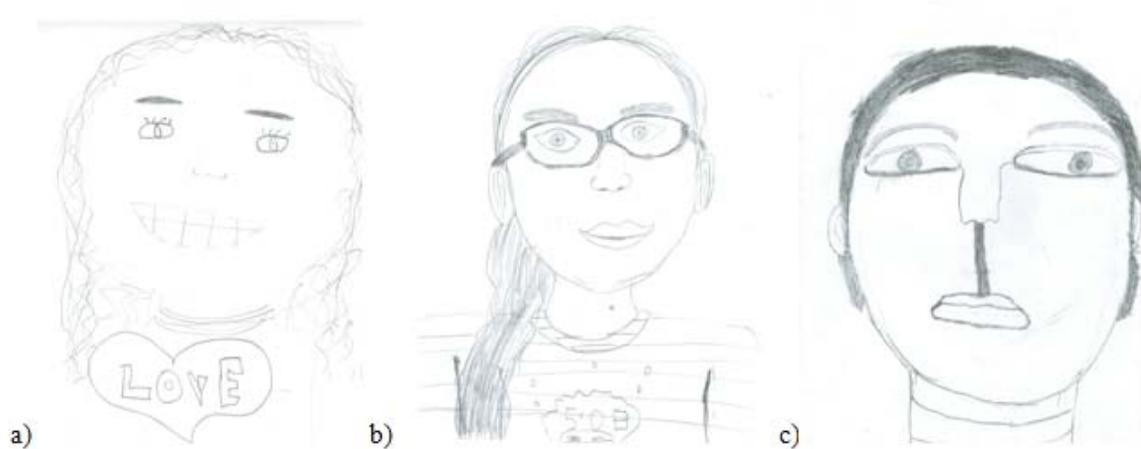
Figure 4.3 (continued)



Note. Figure 4.3 contains overall self-portrait results by gender in five panels. Panel A: Bar graph of raw numbers. Panel B: Pie chart of female style percentages. Panel C: Pie chart of male style percentages. Panel D: Bar graph of details by gender. Panel E: Pie chart of details by gender.

Figure 4.4 contains examples of the kinds of details illustrated in the drawings all taken from female self-portraits by subjects using each of the three drawing styles. Subject (a) from New York used a schematic style and showed the collar of her top with the word ‘LOVE’ in a heart shape; (b) naturalistically drew her glasses, the collar of her shirt with stripes and a figure whose hair has 5’ 08 inscribed within and eyes appear just above the bottom edge of the paper, (c) used a mixed style to include her earrings in one of only three Ghanaian drawings to include any detail at all.

Figure 4.4. *Examples of Self-Portraits with Details*



Note. Examples of (a) NY schematic, (b) GR naturalistic, (c) GH mixed style, all female.

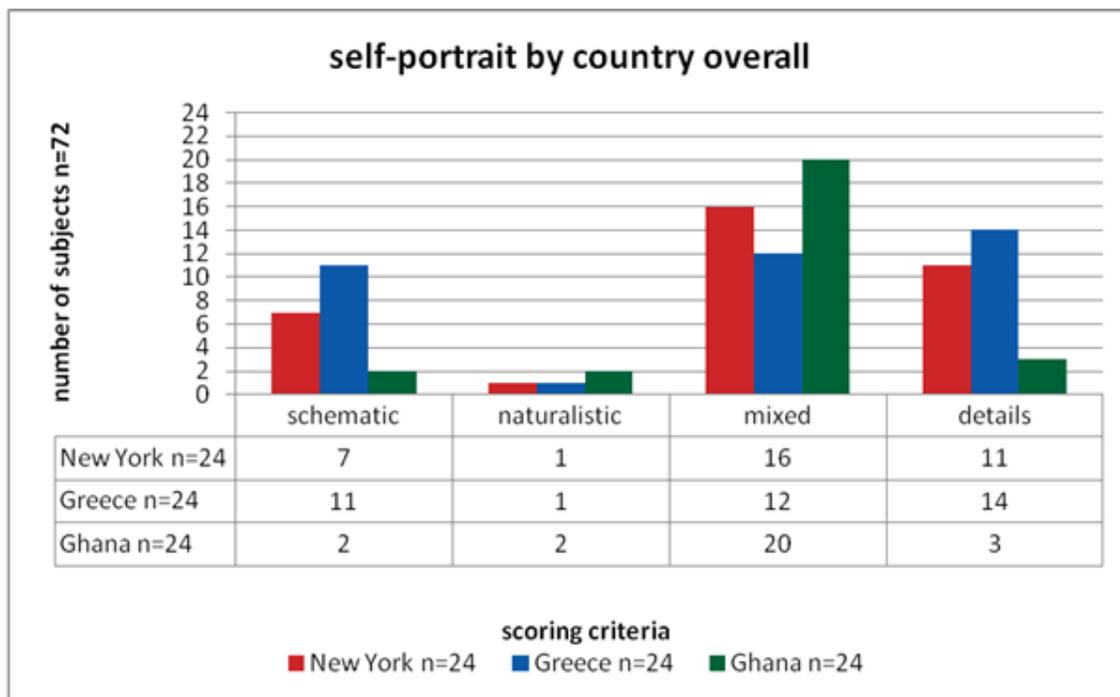
By Country

Based on the master scoring table, data were reorganized to build a profile of the drawings from each country. Data revealed that New York scored almost two-third mixed (16), in keeping with the general trend, one third schematic (7), and one naturalistic score out of 24 subjects (see Figure 4.5). Less than half (11) of the self-portrait drawings from New York contained details such as an insignia.

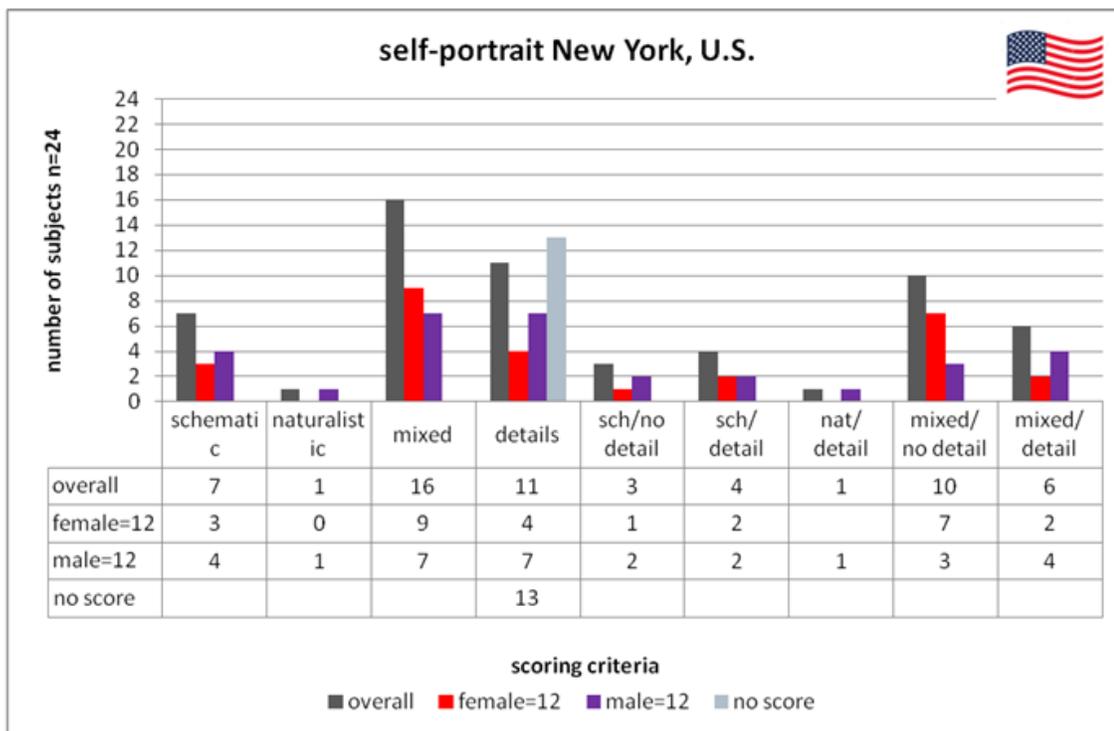
The participant scores from Greece were divided nearly in half schematically drawn (11) and half drawn in a mixed style (12). Notably, more than half of the Greek drawings contained details (14) compared with New York (11) and Ghanaian (3) drawings, as we shall discuss next.

The self-portrait drawings from Ghana were predominantly mixed in style (20), with two schematic scores, two naturalistic scores, and with significantly few details (3) overall.

Figure 4.5. Overall Self-Portrait Results by Country

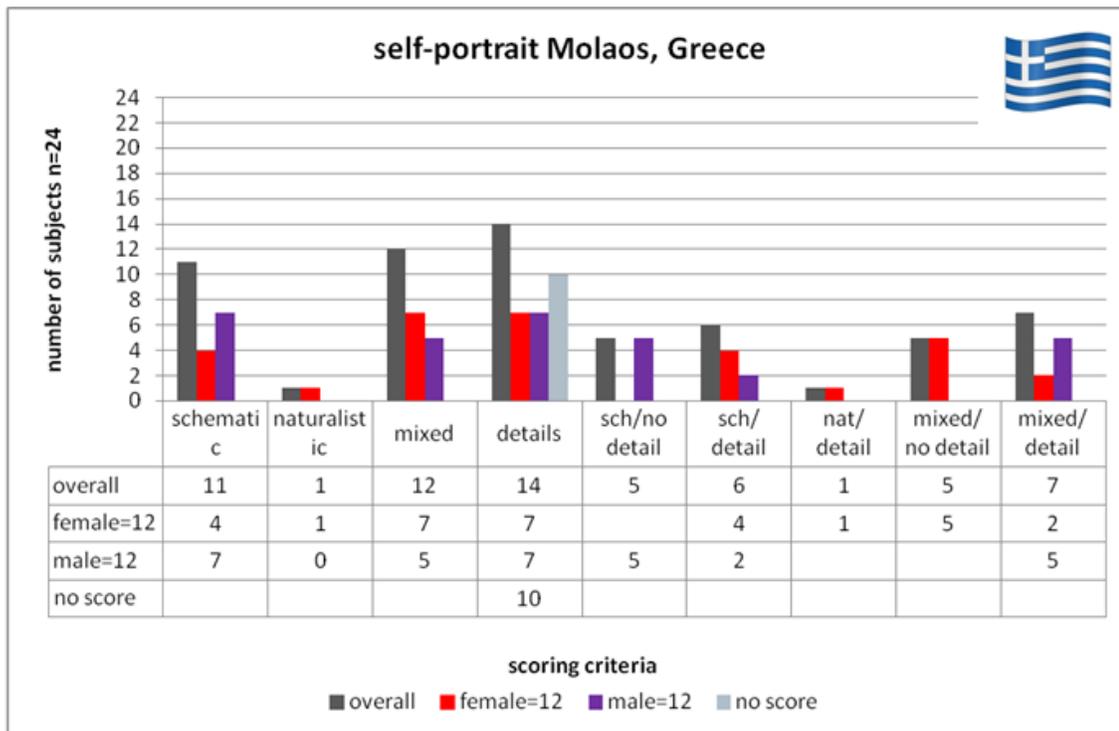


In New York, as more than double the number of subjects did mixed drawing (16) than schematic (7) drawing, the division between gender was narrow, though the majority of schematic were male (4), the majority mixed were female (9) (see Figure 4.6). Of the 24 subjects from New York, 11 added details to their self-portrait drawing from observation. The number of male (7) subjects that added details to their self-portrait drawing was nearly twice as many as females (4), however, with more details being added to the mixed drawings by males (4) than by females (2).

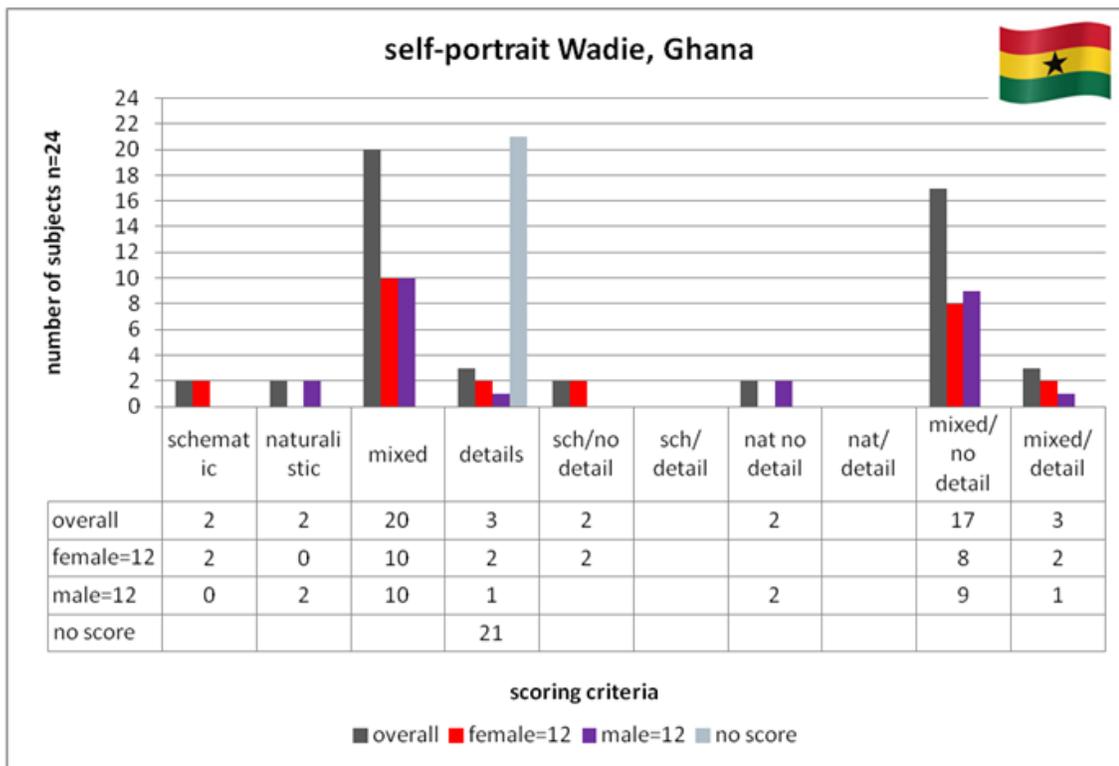
Figure 4.6. *Self-Portrait Results New York*

The self-portrait drawings done by the subjects from Greece were fairly evenly distributed according to drawing style with 11 schematic scores, 1 naturalistic score, and 12 mixed style scores (see Figure 4.7). However drawing style by gender departs from even distribution with 7 males and 4 females making schematic portraits, 1 female a naturalistic portrait, and 7 females, 5 males using a mixed style of drawing for the self-portrait. Of those 14 who added details, by gender the scores were evenly numbered; however, twice as many females (4) added details to the schematic style self-portrait as males (2), whereas 2 females added details to the mixed style drawings compared with 5 males. We see more males (7) in Greece using schemas than females (4), yet of those adding details to their drawings, more females (4) added details to their schematic style self-portraits in contrast with more males (5) adding details when using a mixed style of drawing.

Figure 4.7. Self-Portrait Results Greece



The self-portrait drawings from Ghana, in comparison with those from New York and Greece, are overwhelmingly mixed with few scores for additional details. 20 participants made mixed style self-portraits by as many females (10) as males (10). Only 2 females used a schematic drawing style and 2 males a naturalistic style. The absence of details in the Ghanaian drawing details draws attention to an incongruity that may later be explained through school policy for students wearing uniforms. It is interesting, though, that the details that do appear in the Ghanaian drawings are in the mixed drawing style, with 2 females and 1 male adding detail to their self-portrait. See Figure 4.8 for self-portrait results, Wadie, Ghana.

Figure 4.8. *Self-Portrait Results Ghana*

Self-Portrait Summary

The drawings from New York are mostly mixed style (16), then schematic (7) with one naturalistic and evenly distributed between female and male. Males (7) included more details than females (4). Greece is virtually divided in half schematic (11), mixed (12), and one naturalistic, with males in Greece using more schemas (7) and females more mixed (7). However the same amount of details are used by both genders (7 each). By contrast, most of the drawings from Ghana are mixed (20) by 10 males and 10 females, two schematic (female) and two naturalistic (male). Few Ghanaian participants added details (3). Viewed as a baseline for determining level of drawing proficiency among subjects, the self-portrait drawing indicates the Ghanaians' skills most developed, then New Yorkers, and then Greeks. Overall, more females (26) use a mixed style than males (22), but males (15) add more details than females (13).

Full Self-Portrait

The second drawing task accomplished during the second class meeting with a duration of 50 minutes consisted of three parts arranged on one piece of paper folded in three, shown in the illustration of drawing tasks in Figure 4.1. The full self-portrait drawing is located in the panel to the left of center. Participants were given pencils, 8-1/2 x 11 drawing paper, and a choice of any or all: markers, colored pencils, crayons. The full self-portrait, from head to foot, was drawn from memory. Overall, a majority of participants used a schematic style of drawing for these full self-portraits, specifically 40 out of 72 were schematic, one naturalistic, and 31 mixed style (see Figure 4.9).

Figure 4.9. *Overall Full Self-Portrait Results*

A

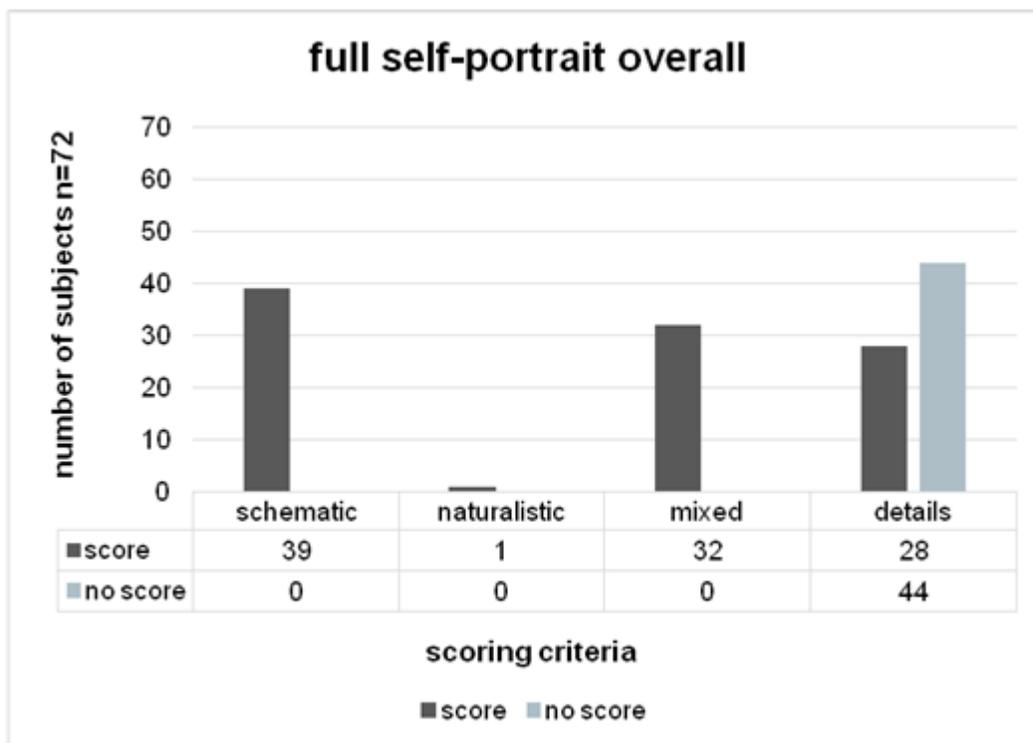
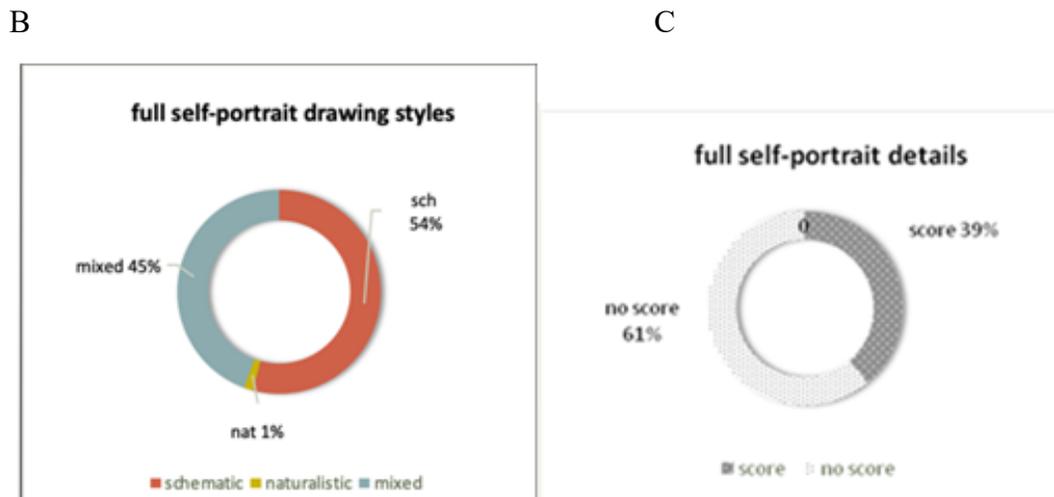


Figure 4.9 (continued)



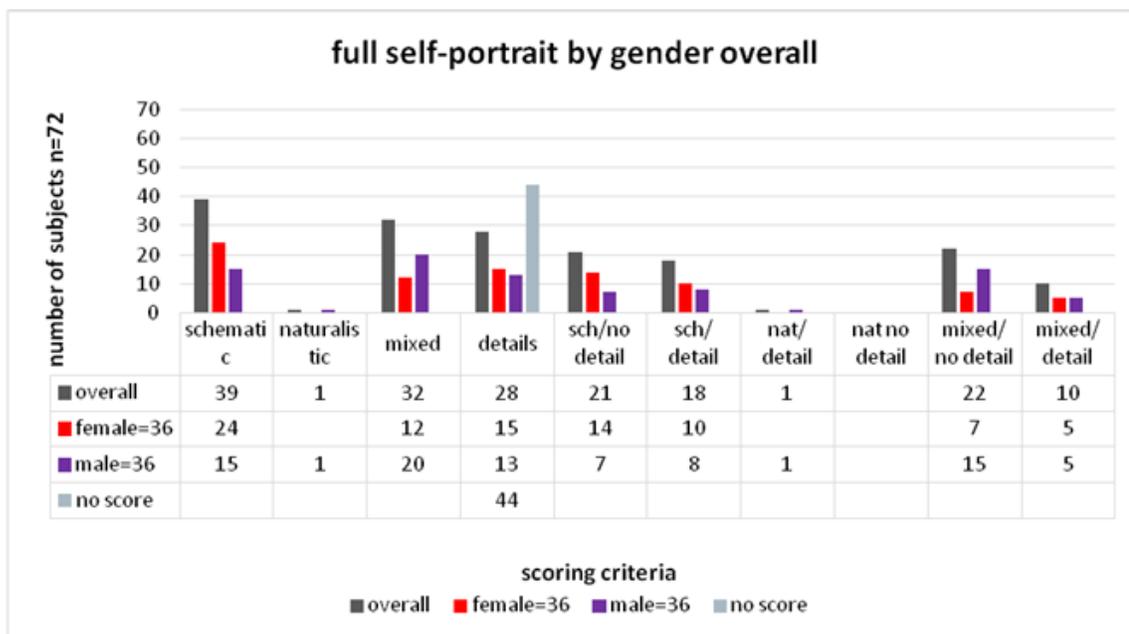
Note. Figure 4.9 contains overall full self-portrait results in three panels. Panel A: Bar graph of raw numbers. Panel B: Pie chart of drawing styles in percentages. Panel C: Pie chart of details in percentages.

By Gender

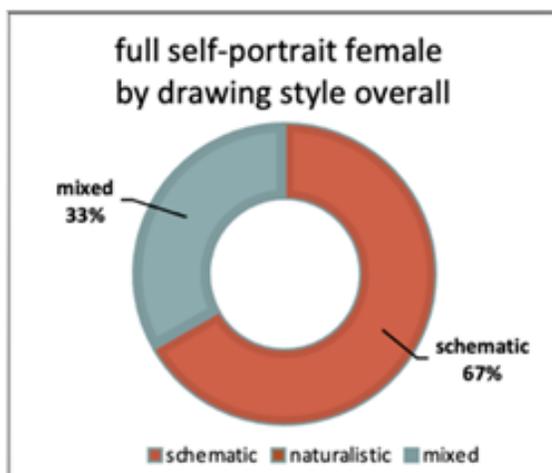
Two-thirds of the female subjects used a schematic drawing style, and one-third employed a mixed drawing style for the rendering of the full self-portrait for the second of three drawing tasks in this study. Whereas 15 male subjects scored using a schematic style, one naturalistic, and 20 male subjects applied a mixed drawing style. That is to say overall that twice as many females are making schematic drawings, whereas twice as many males are making mixed style drawings. Fifteen females, 13 males scored for including details in their full self-portrait drawing, and 44 of the 72 participants had no score for details. Of the 15 females whose drawings scored for details, 10 were schematic in style with details, and 5 were mixed style with details. Of the males, 8 were schematic with details, and 5 were mixed style with details. There may be an indication here of details being more often attached to the schematic drawing style slightly more by females than by males (see Figure 4.10).

Figure 4.10. Overall Full Self-Portrait Results by Gender

A



B



C

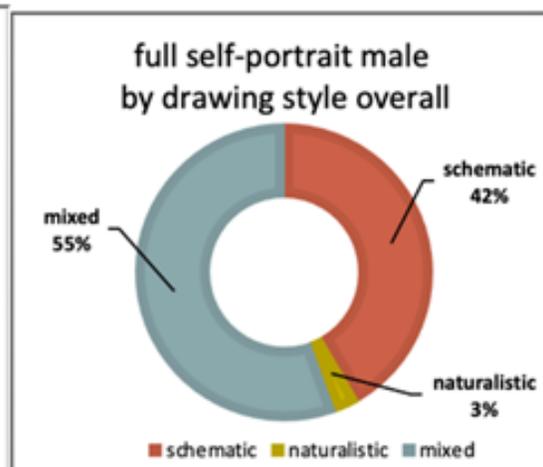
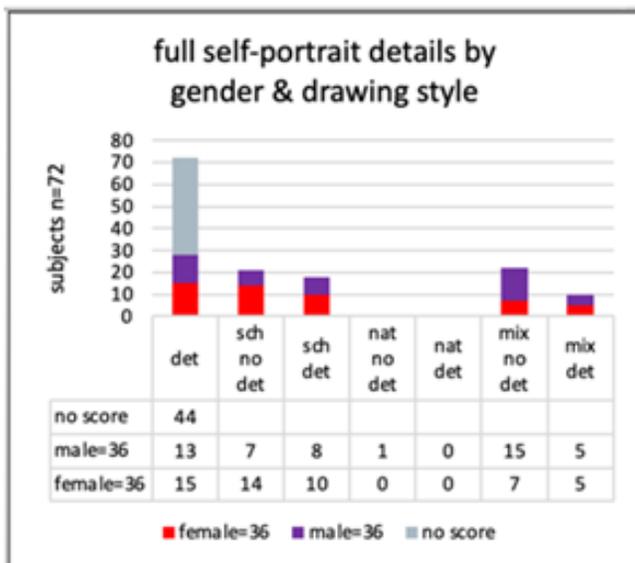
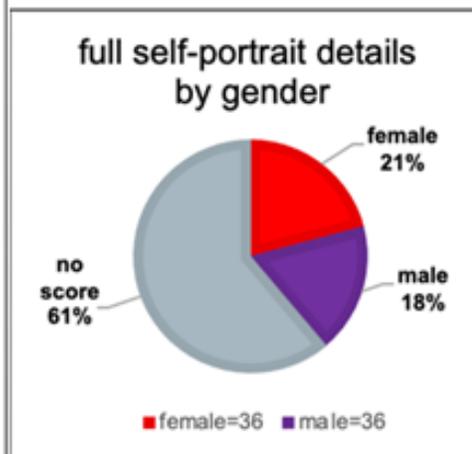


Figure 4.10 (continued)

D



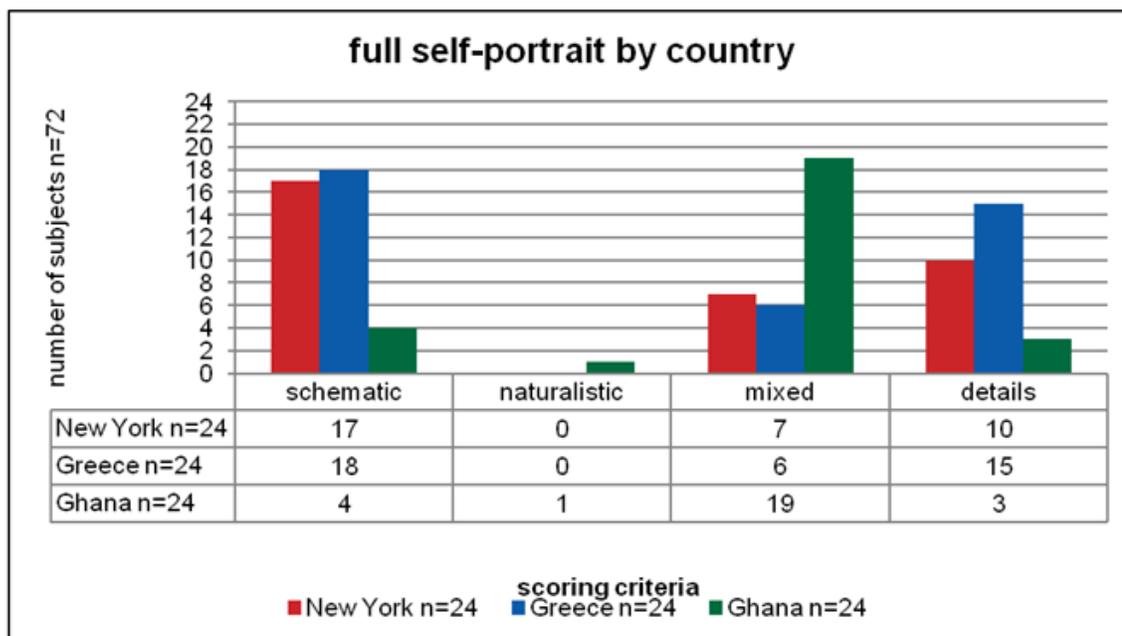
E



Note. Figure 4.10 contains overall full self-portrait results by gender in five panels. Panel A: Bar graph of raw numbers. Panel B: Pie chart of female style percentages. Panel C: Pie chart of male style percentages. Panel D: Bar graph of details by gender. Panel E: Pie chart of details by gender.

By Country

Roughly three-quarters of the participants from New York and Greece used a schematic drawing style and one-quarter a mixed drawing style for the full self-portrait panel of the triptych task. By comparison, four-fifths (19) of the Ghana subjects used a mixed drawing style for the full self-portrait, 4 drawings were schematic in style and 1 was naturalistic in style. The Greek cohort was recorded as having included the most details with a score of 15 out of 24. The New York cohort scored less details included in their full self-portrait drawing with 10 out of 24. Strikingly, only three subjects from the Ghana group scored for details in the full self-portrait drawing. Most notably subjects from New York and Greece who had used a mixed style of drawing for their self-portrait switched to a schematic drawing style for the full self-portrait, while the subjects from Ghana maintained employment of a mixed style of drawing (see Figure 4.11).

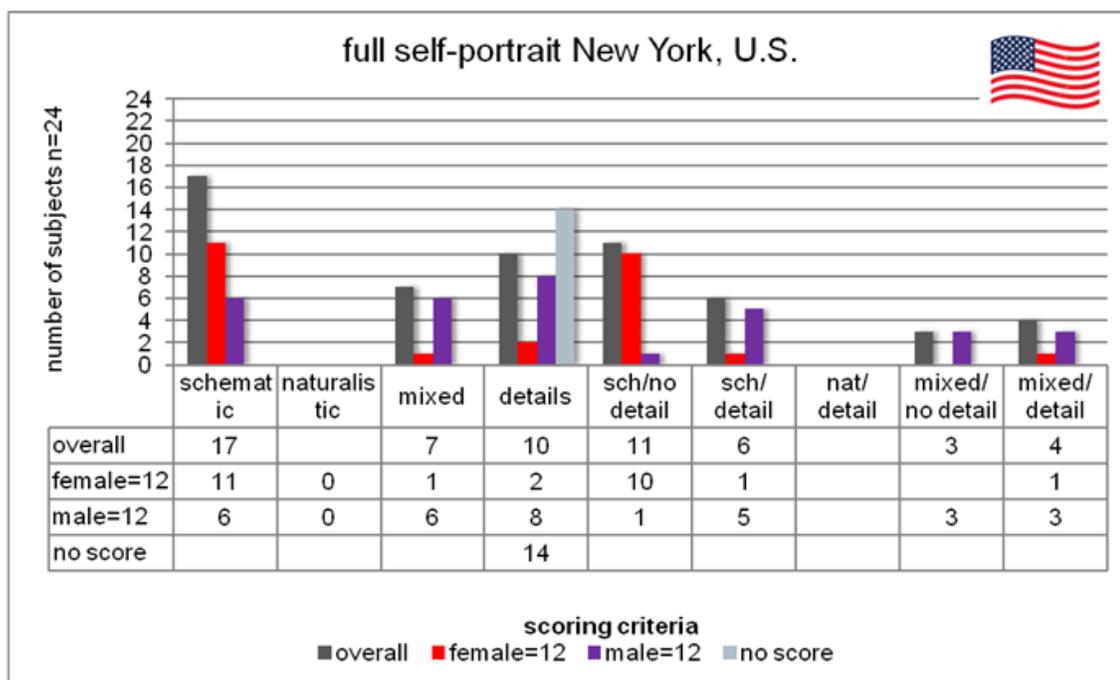
Figure 4.11. *Full Self-Portrait by Country*

Approximately three-quarters or 17 out of 24 of the subjects in the New York group used a schematic style of drawing, and one-quarter or 7 out of 24 used a mixed drawing style for the full self-portrait (see Figure 4.12). Of those subjects making schematic drawings, 11 are female and 6 male compared with 1 female and 6 males creating mixed style drawings. Or put another way, the males are evenly divided in producing six each schematic and mixed style drawings as opposed to the females with 11 schematic drawings and 1 mixed full self-portrait. In the New York cohort, the overarching trend from self-portrait drawing from observation to full self-portrait from memory/imagination is indicating a significant reversal from a majority of 16 mixed style, 1 naturalistic, and 7 schematic style self-portrait drawings to 17 schematic full self-portrait and 7 mixed style full self-portraits, and that by gender, a greater number of females than males regressed to a schematic style of drawing in the New York cohort.

Looking at the relationship between drawing style and details, when looking at the gender only results earlier, seemed to indicate that more females were including details in

schematic style drawings; however, the gender results tied to country yields a slightly different story for the subjects from New York, United States. First, a slight majority of the participants, namely, 14 out of 24, did not include details regardless of drawing style. Of those subjects that did include details, the majority are male, with 5 males and 1 female adding details to their schematic full self-portrait and 3 males and 1 female adding details to their mixed style full self-portrait. Therefore, males from New York added details to their drawings in a ratio of 4:1 with their female counterparts. However, 10 out of 12 females did not add details and drew schematically.

Figure 4.12. *Full Self-Portrait New York, U.S.*

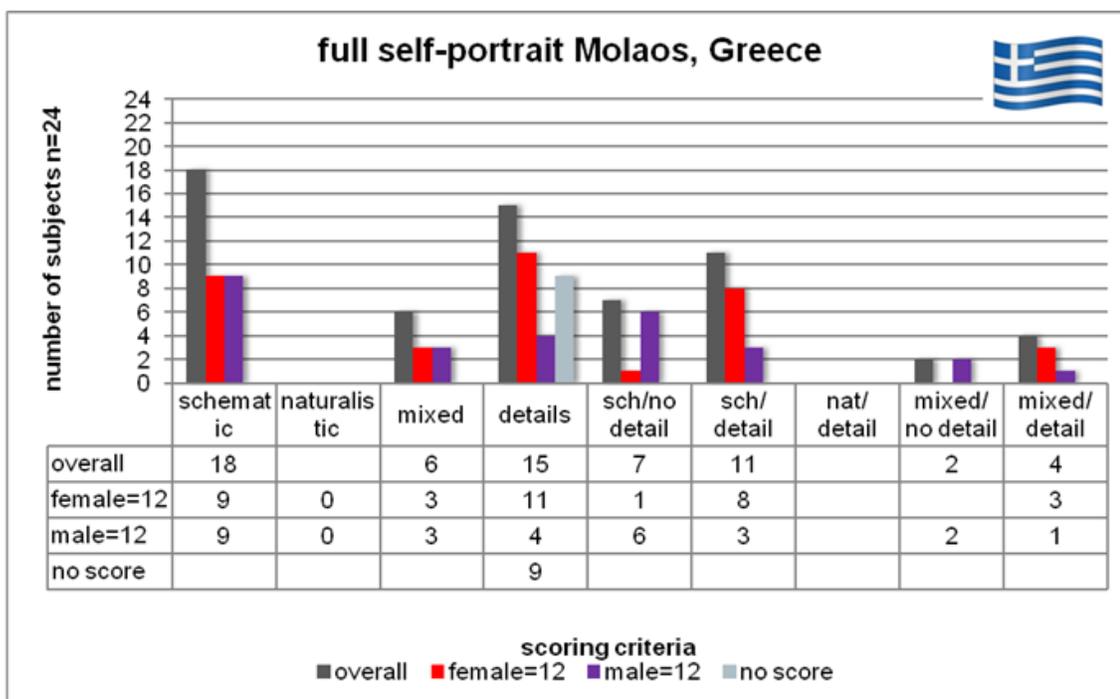


Similar to the New York subjects, three-quarters of the Greek cohort used a schematic style, and one-quarter drew mixed style full self-portraits (see Figure 4.13). The Greek subjects shifted drawing styles significantly from the first self-portrait drawing task to the full self-portrait portion of the second drawing task, switching from a fairly even distribution of 11 schematic, 1 naturalistic, and 12 mixed style self-portraits to

a majority using a schematic style of drawing for the full self-portrait. Unlike the New York cohort, however, the Greek results by gender are evenly distributed, with 9 females and 9 males using a schematic style and 3 females and 3 males using a mixed style of drawing for the full self-portrait.

With regard to detail, 15 of the 24 participants scored for adding details, and specifically 8 females and 3 males added detail to their schematic drawing and 3 females and 1 male added detail to their mixed drawing. The majority of subjects adding details from the Greek group were female, in contrast with the majority of males adding details in the New York cohort in almost the same ratio, in this case 11:4, female to male.

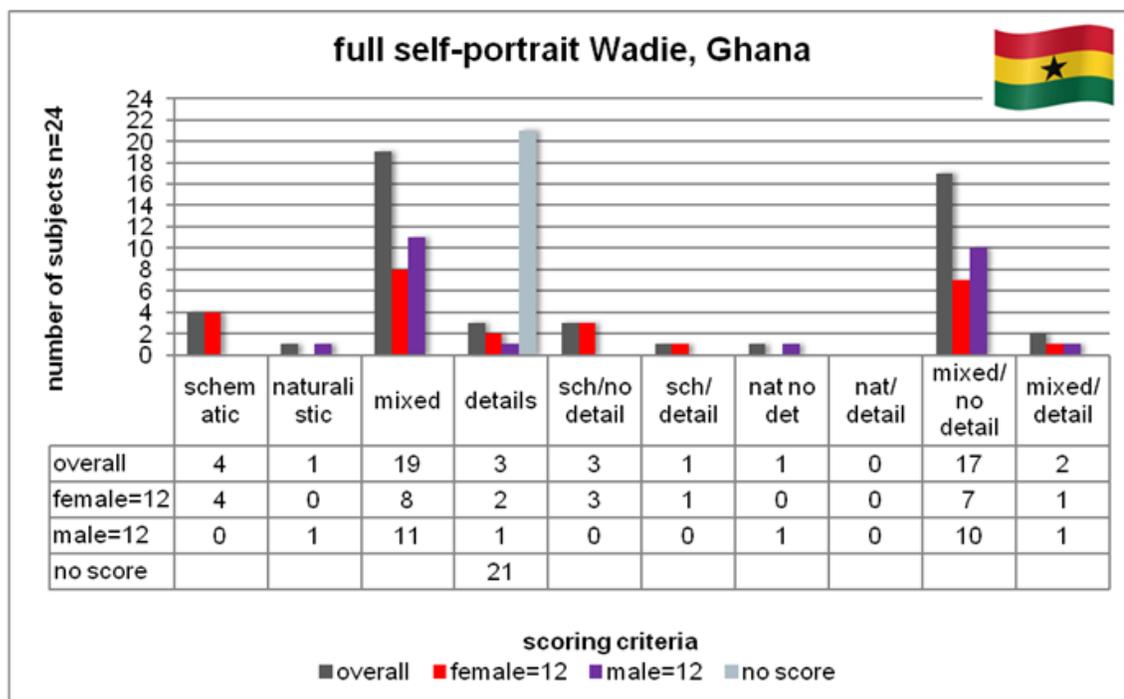
Figure 4.13. *Full Self-Portrait Molaos, Greece*



In a departure from the trend seen in New York and Greece, the Ghanaian cohort maintained the use of mixed drawing style for the full self-portrait panel of the second (letter fold) drawing task (see Figure 4.14). With a slight shift in numbers, 4 schematic, 1 naturalistic, and 19 mixed style drawings, it is significant to note that only females

drew the full self-portrait in a schematic style. And of the 19 mixed style drawings, 8 were done by females and 11 by males. Again, as in the self-portrait drawings, the Ghana subjects added little detail that was scored for except for 1 female schematic style drawing with details, 1 female mixed and 1 male mixed style full self-portrait with details. The majority of participants from Ghana (21) did not score for details. The continued use of a predominantly mixed style of drawing by the participants in the study from Ghana without a retreat back to schemata may be an indication of drawing skill systems being more firmly in place.

Figure 4.14. *Full Self-Portrait Wadie, Ghana*



Full Self-Portrait Summary

Notably, in the transition from observation drawing with a mirror to having to rely on memory, the New York and Greek cohorts mostly reverted to schematics whereas Ghana's participants maintained using a more mixed style. In general females were the main contributors to this trend with the most reversals coming from New York females

(8) to schematic drawing from mixed, whereas only 3 males turned from mixed to schematic and 1 switched from naturalistic to mixed. The number of NY males including details increased as the females decreased. From Greece 5 females switched from mixed to schematic and 1 from naturalistic to mixed. The number of females adding details increased from 7 to 11, whereas the males decreased from 7 to 4. In Ghana, 2 females switched from mixed to schematic and 1 male from naturalistic to mixed. Still only 3 Ghanaians included details in this drawing, with the Greeks using the most details and New York in the middle. Most of the NY males adding details were also drawing schematically (5), as were most of the GR females (8). Yet 10 out of 12 New York females drew schematically and did not add details. Considering that mostly the females from NY and GR made the shift in style from mixed style self-portrait drawing from observation to schematic drawing of full self-portrait from memory, the change was made to feel more at ease. Therefore, when NY females drew schematically (10), they omitted details, whereas the Greek females (8) used details when they drew schematically; these trends are indicative of conditions under which they are accustomed and comfortable.

Superhero Self-Portrait

The superhero self-portrait was part of the second drawing task drawn in the middle panel of the letter fold using pencils and a choice of any or all: markers, colored pencils, crayons. Participants were asked to reinvent and draw themselves as a superhero of their own device wearing their superhero costume. In addition to drawing styles and details, the superhero self-portraits were also scored for the following categories: assured or hesitant (execution of the figure looked confident and/or practiced), proportion (parts of figure drawn in relative size to the whole), contour (used line to show the outline), composed in parts (built figure by connecting shapes), face and or body drawn in profile, and presence of a discernible weapon or gadget. In viewing the charts below, the three categories for drawing style are to be considered parts of a whole whose total scoring

equals the number of subjects in the study. The details, proportion, contour, and composed in parts categories stand alone. The categories assured, hesitant, and assured/hesitant combo are taken together as a cluster as well as the columns for face in profile, body in profile, face and body in profile, and then the entries for gadgets, weapon/gadget form another and final grouping. Judges were emphatically trained to score only for what they saw present in the drawing, not to interpret, and therefore as it was difficult to distinguish the weapons from the gadgets, the ambiguity led to many non-scores. The category for details added using memory, observation, imagination or a combination of the three has been removed from the results due to low scores indicating a lack of significance.

Figure 4.15. *Overall Results for Superhero Self-Portrait*

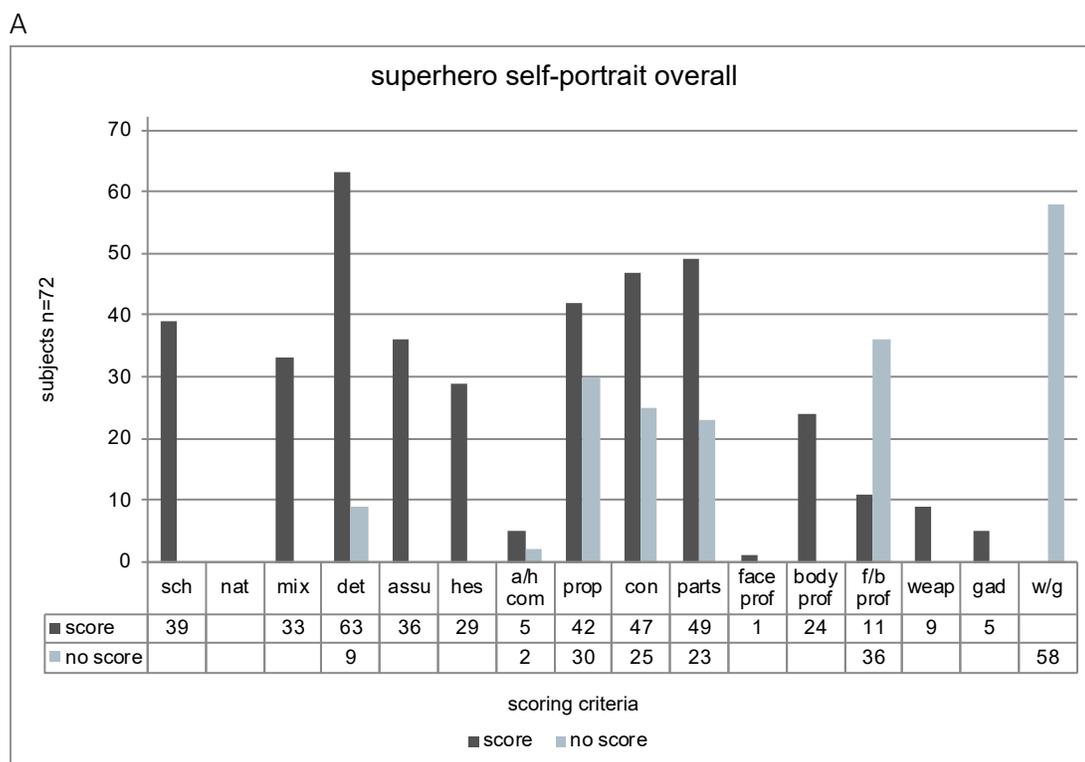
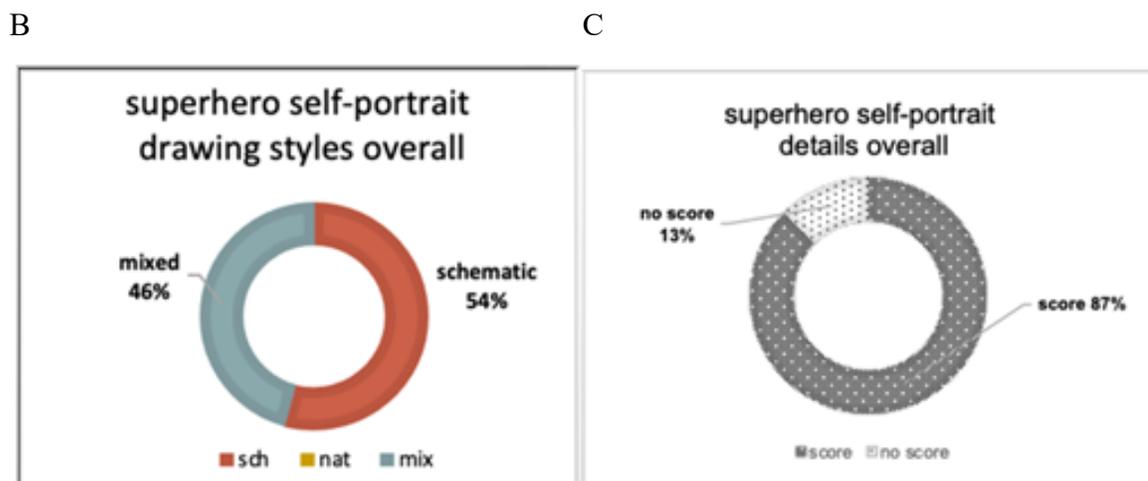


Figure 4.15 (continued)



Note. Figure 4.15 contains overall superhero self-portrait results in three panels. Panel A: Bar graph of raw numbers. Panel B: Pie chart of drawing styles in percentages. Panel C: Pie chart of details in percentages.

Overall the superhero self-portraits were slightly more schematic (39) than mixed in style (33). From the full self-portrait to the superhero self-portrait there has been a general shift further in drawing style from mixed to schematic. Strikingly, 87%, almost all of the superhero self-portraits, included details (65 out of 72) compared with less than half of the subjects using details in the self-portrait (29) and the full self-portrait (28). The general scores were higher for assured (36) than hesitant (29) in drawing execution; more than half of the superhero self-portraits were scored as having been rendered in proportion (42), using contour (47), composed as parts (49) and drawn in profile (36). In all, there were 9 weapons and 6 gadgets scored for being present in the superhero self-portrait drawings (see Figure 4.15).

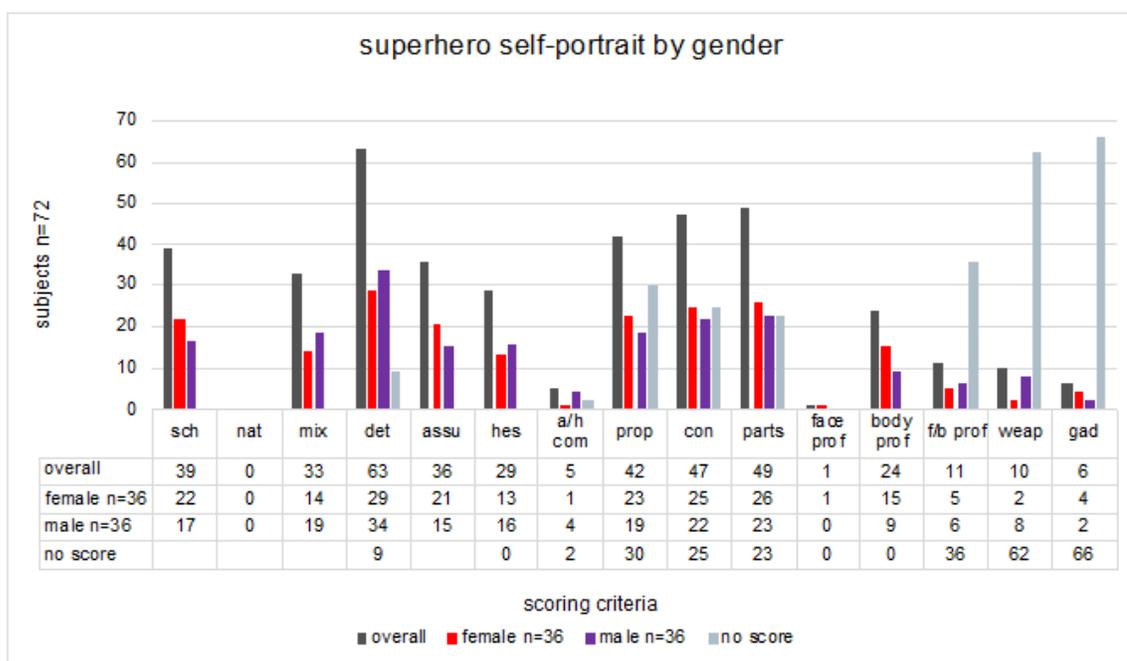
By Gender

By gender, the female (61%) superhero self-portraits are more schematic than those drawn by the males (47%) (see Figure 4.16). Both females (40%) and males (47%) are about evenly scored for details in their superhero drawing, with the males slightly ahead. Female drawings are more assured than those by the males, which may indicate a

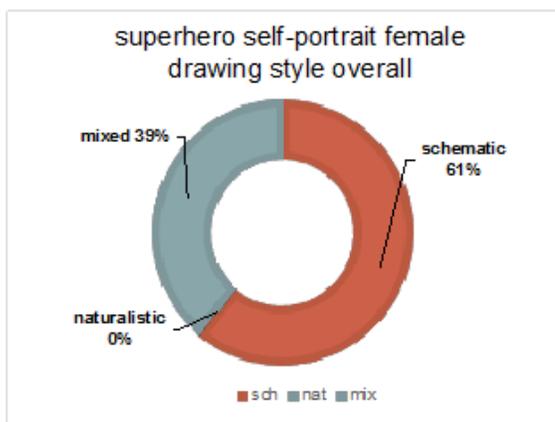
connection between using a schematic drawing style and confident rendering, to be discussed to a greater extent in the next chapter. The scores for proportion, contour, and composition of figures are similar, with the females scoring slightly but not significantly higher in all three categories. Noteworthy is the greater female score (15) for body in profile than the males (9).

Figure 4.16, Overall Results for Superhero Self-Portrait by Gender

A



B



C

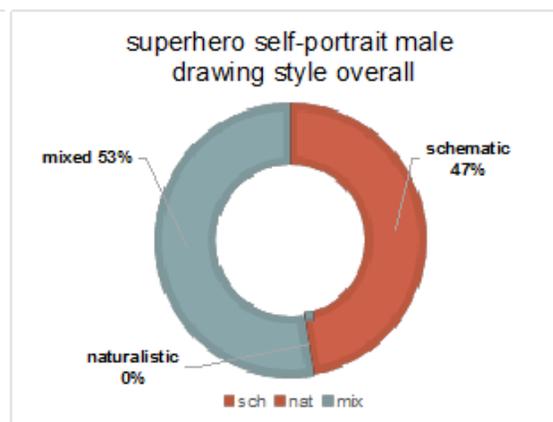
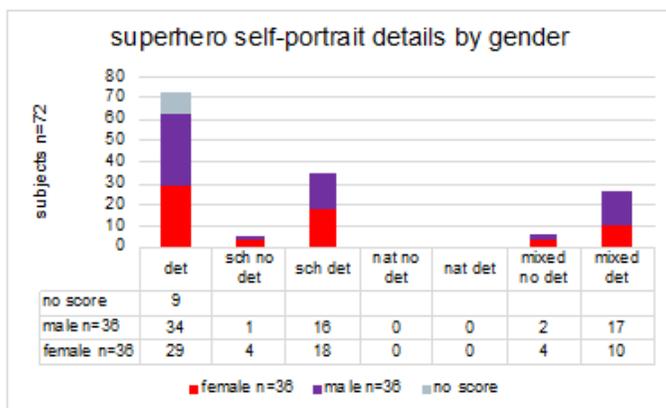
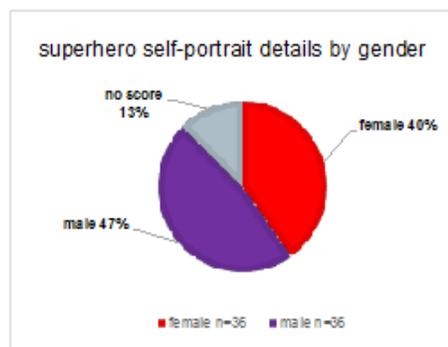


Figure 4.16 (continued)

D



E



Note. Figure 4.16 contains overall superhero self-portrait results by gender in five panels. Panel A: Bar graph of raw numbers. Panel B: Pie chart of female style percentages. Panel C: Pie chart of male style percentages. Panel D: Bar graph of details by gender. Panel E: Pie chart of details by gender.

In both schematic and mixed styles, females and males alike frequently drew only the feet in profile as a device to indicate movement (see Figure 4.17). The scores for face and body in profile are nearly even by gender and as shown in the next section by country, all 11 scores are from the Ghanaian group. It is of interest that none of the participants from Greece or the United States drew the entire figure in profile. Weapons were distinctly depicted by 8 males in their superhero self-portrait and 1 female, whereas 3 females drew themselves with gadgets, as did 2 males.

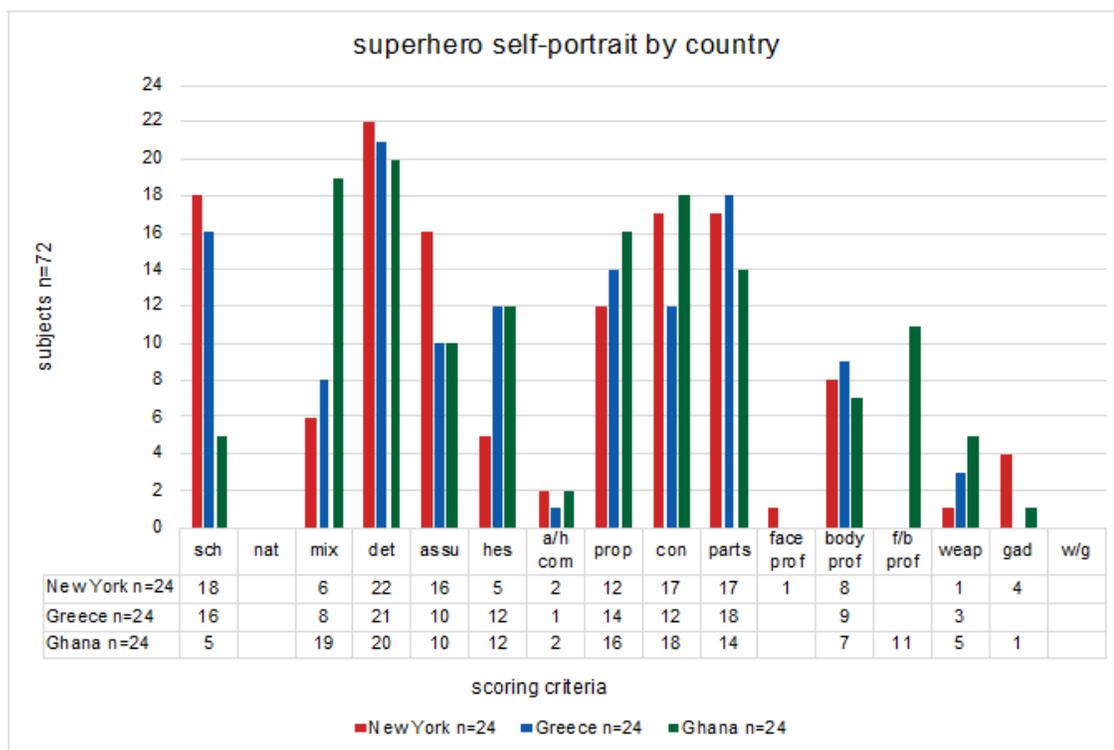
Figure 4.17. *Examples Schematic Style Profile Drawing*



Note. Subject #5 Greece (Left), Subject # 10 U.S. (Right)

By Country

In comparison, by country, the New York cohort made the greater percentage of schematic drawings (46%), whereas the Ghanaian cohort made the greatest percentage (58%) of mixed style drawings (see Figure 4.18). All three countries scored high for adding details. The large number of scores overall for both using contour to draw and composing the figure in parts indicates the participants are using a combination of the two means to define a figure. It is important to note that in the drawings where the New York and Greek participants score for body in profile, it largely is a limited use of profile, with only the feet drawn in profile. Solely the subjects from Ghana drew the face and body in profile, making this a distinctly significant score for further discussion in the next chapter. In contrast with the Greek (10) and Ghanaian (10) groups, the New York subjects scored highest for assurance (16) in their drawings and schematic drawing (18), indicating a possible connection between schematic drawing and confidence in the execution of the drawing to be examined more closely in the following sections.

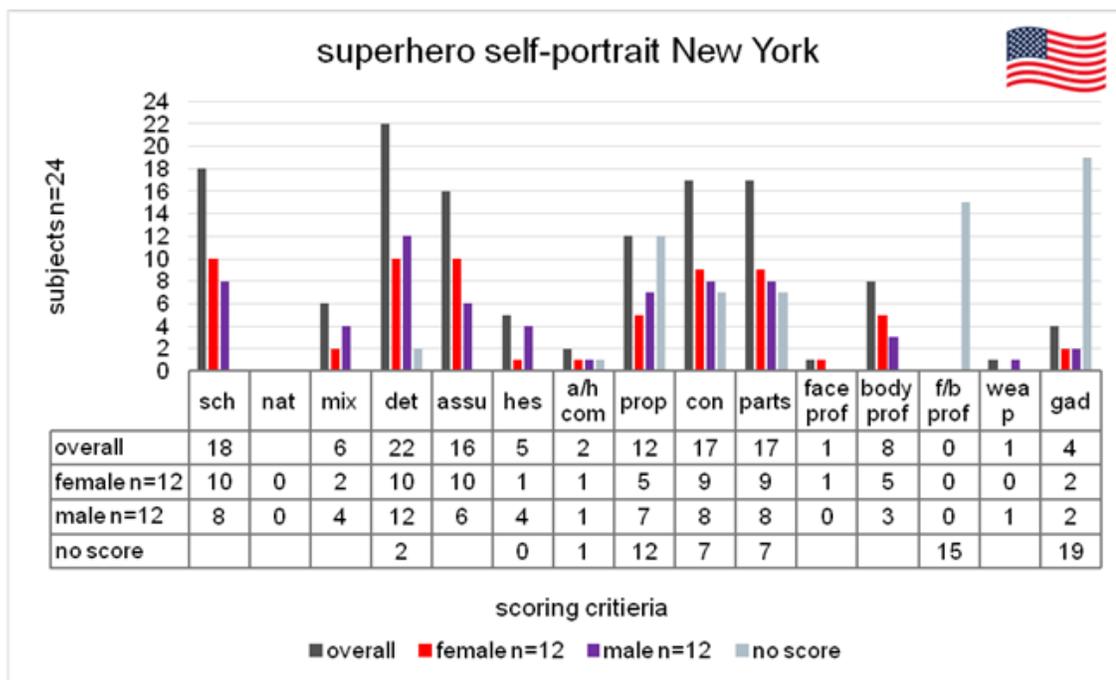
Figure 4.18. *Superhero Self-Portrait by Country*

Details and Criteria Clusters by Drawing Style

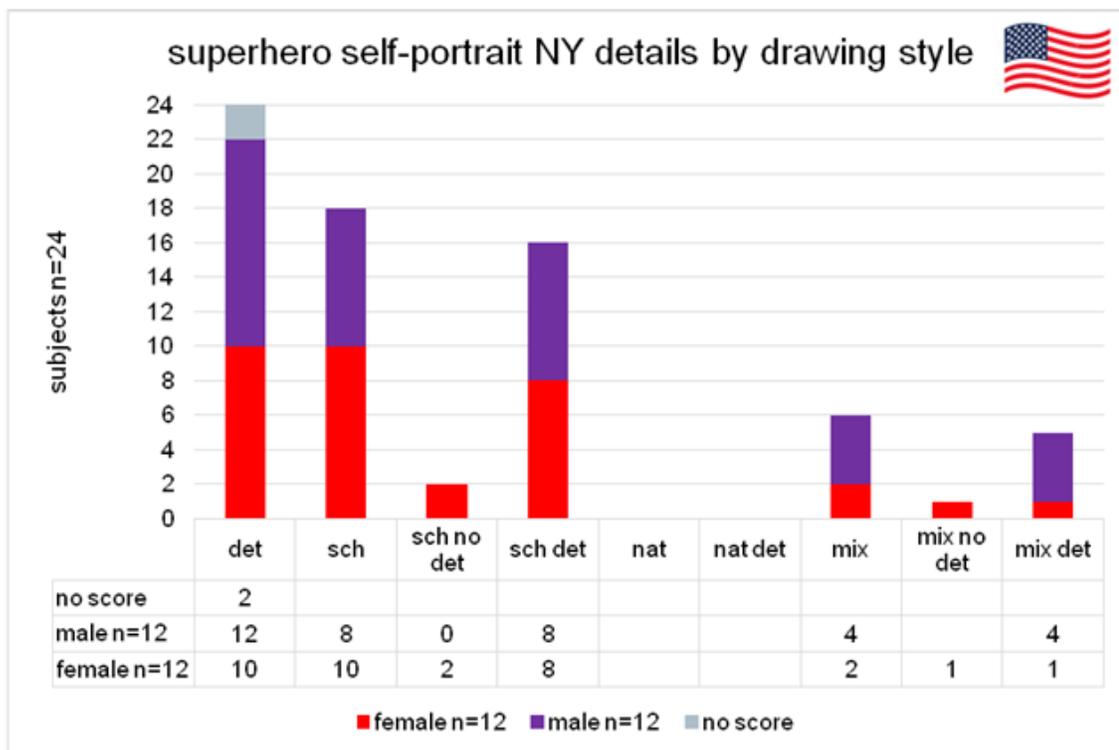
In this section, there are two charts for each country: New York, Greece, Ghana. The general superhero self-portrait chart shows overall results and by gender for each respective country for the following categories: schematic, naturalistic, mixed, details, assured, hesitant, a/h combo, proportion, contour, composed as parts, face in profile, body in profile, face & body in profile, weapon, gadget. The second chart shows the details category expanded by drawing style according to inclusion or exclusion of details, namely: schematic, schematic without detail, schematic with detail, naturalistic, naturalistic with detail, mixed, mixed without detail, mixed with detail. Results for additional criteria including assurance and hesitancy, figure composition data such as proportion, contour, parts, and appearance of weapons or gadgets in the drawings will also be discussed by style.

Superhero Self-Portrait: New York.

Figure 4.19. *Superhero Self-Portrait New York*



New York: Details. Breaking down the New York participants' style scores of 75% schematic and 25% mixed by gender, females scored more schematic style superhero self-portraits (10) than males (8) (see Figure 4.19). No one from this cohort made a naturalistic style superhero self-portrait drawing. All males (12) added details, 8 schematic and 4 mixed. Ten (10) females drew schematically, of which 8 added details, 2 did not, and of the 2 females who used a mixed style to draw, 1 did not add details. Therefore most of the NY participants who added details drew using a schematic style, thereby establishing a connection between style and detail (see Figure 4.20).

Figure 4.20. *Superhero Self-Portrait NY Details by Drawing Style*

Assurance of Drawings. Of the 16 subjects from New York who scored for drawing with assurance, 10 were female and 6 were male. Furthermore, of the 10 females who drew with assurance, 8 used a schematic drawing style and 2 used a mixed style, thereby indicating that females from New York who used a schematic style of drawing drew with confidence. The 6 males from New York who scored for assured drawing of the superhero self-portrait were evenly divided between schematic and mixed drawing styles. Of the 4 males who drew hesitantly, 3 used a schematic style; therefore, males from New York who drew hesitantly tended to use a schematic style of drawing. The 1 female who scored for hesitant also used a schematic drawing style, leading to the conclusion that although the males use more details, their drawings appear more hesitant.

Composition of Drawings. The male (7) superhero self-portrait drawings are more in proportion than those by females (5) with scores of 7 and 5, respectively. Subjects who drew in proportion filtered by drawing style: 3 females schematic style, 2 mixed, 3 males

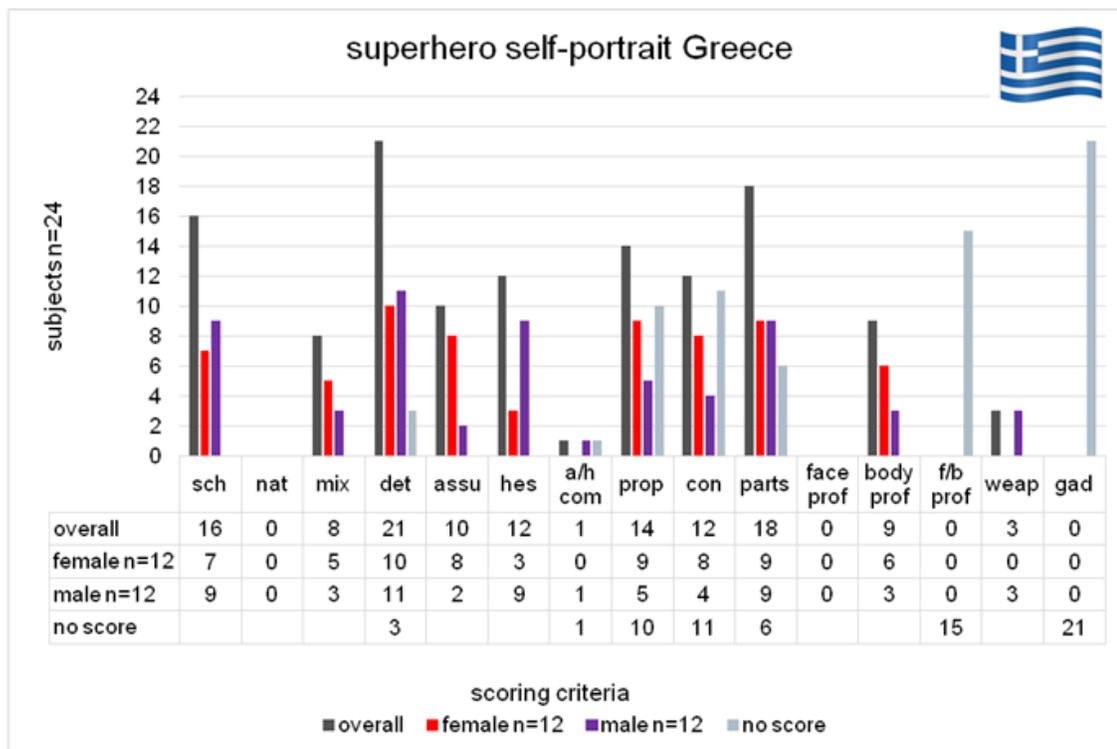
schematic, and 4 mixed, showing no dominant style amongst participants. Male and female scores for use of contour and composing the figure in parts were nearly the same for these two categories, with males scoring 8 in both categories and the females 9. However, the spread in the numbers by style is similar to the New York cohort: of 9 females who used contour lines, 7 drew schematically, 2 a mixed style, and of 8 males, 6 drew schematically and 2 used a mixed style. Likewise, the trend continues with composing the figure in parts: of 9 drawings by females, 8 were schematic, only 1 mixed, and by 8 males, 6 were schematic and 2 mixed. The results show drawing in proportion independent of drawing style, whereas using contour line and composing the figure in parts appears predominantly in schematically drawn portraits.

Use of Profile. One female drew the face in profile using a schematic style. Of the 8 New York subjects who drew the body in profile (5 females and 3 males), 3 females used schemas, 2 females a mixed style, 1 male drew schematically and 2 males used a mixed style to draw the body of their superhero self-portrait in profile. With inconclusive low scores, the drawing style used by the participants from New York is variable in connection with drawing the figure in profile and may be an indication of artistic development and the skill system not being firmly in place.

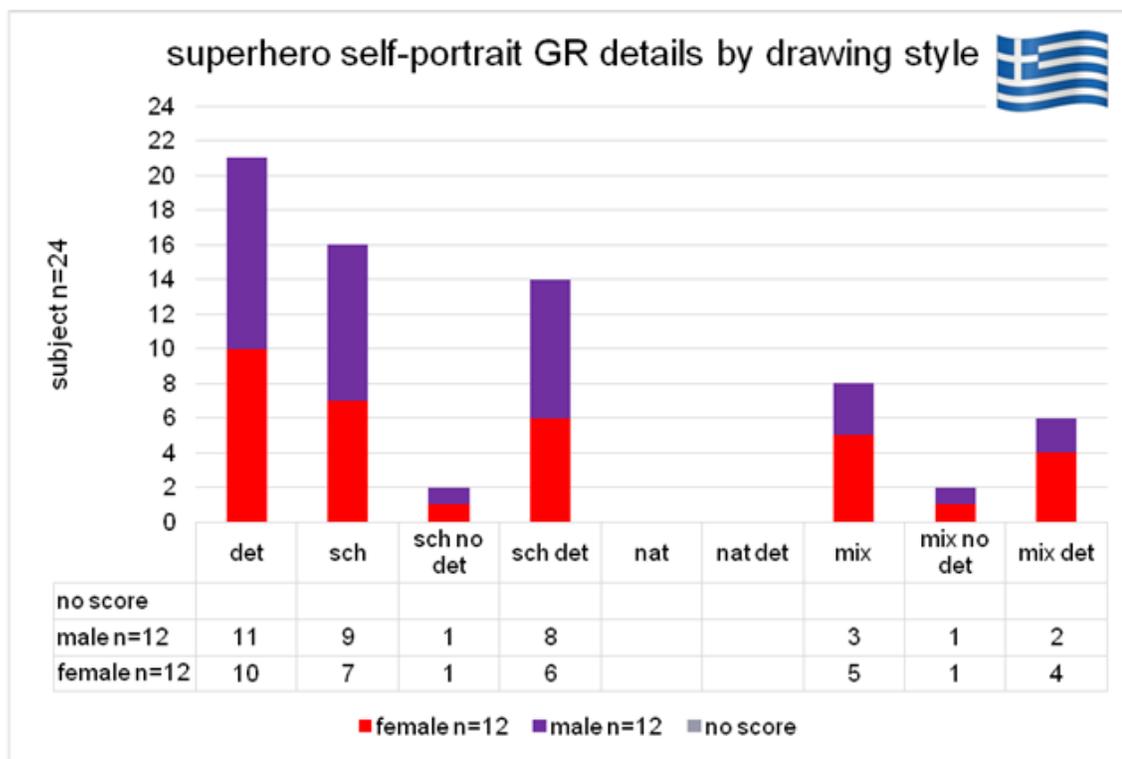
Weapons and Gadgets. Additionally, 1 male drew a weapon with mixed style and 2 males a gadget schematically. Two females drew a gadget, 1 used schemas and the other mixed style. Please see charts.

Superhero Self-Portrait: Greece.

Figure 4.21. *Superhero Self-Portrait Greece*



Greece: Details. Compared to the New York cohort, the Greek females made fewer schematic drawings (7) and more mixed style (5) drawings than their male counterparts, who scored 9 schematic superhero self-portrait drawings and 3 mixed. No one from this cohort made a naturalistic style drawing (see Figure 4.21). Notably, both Greek females (10) and males (11) scored significantly for adding details (with 3 no scores) regardless of which drawing style was employed. No one from this cohort made a naturalistic style superhero self-portrait drawing (see Figure 4.22).

Figure 4.22. *Superhero Self-Portrait Greece Details by Drawing Style*

Assurance of Drawings. Noteworthy as well, the majority of females drew with assurance whereas the males drew hesitantly. Eight out of 12 female participants drew with assurance, evenly divided 4 schematic 4 four mixed; 3hesitant, 2 schematic, 1 mixed; and 1 no score. Two males drew with assurance, 1 schematic and 1 mixed. Therefore, the majority of females drew with assurance, and of the subjects who drew with assurance, female and male alike were equally divided between the use of a schematic and mixed drawing style, showing no apparent connection between confident drawing and drawing style. On the other hand, with three-quarters of the Greek males drawing schematic superhero self-portraits and one-quarter mixed style, the majority who drew hesitantly were male (9), who also drew schematically (7) with 2 mixed and 1 combo a/h also schematic, thereby pointing to a relationship between using schemas and lack of confidence or practice in drawing by the Greek males.

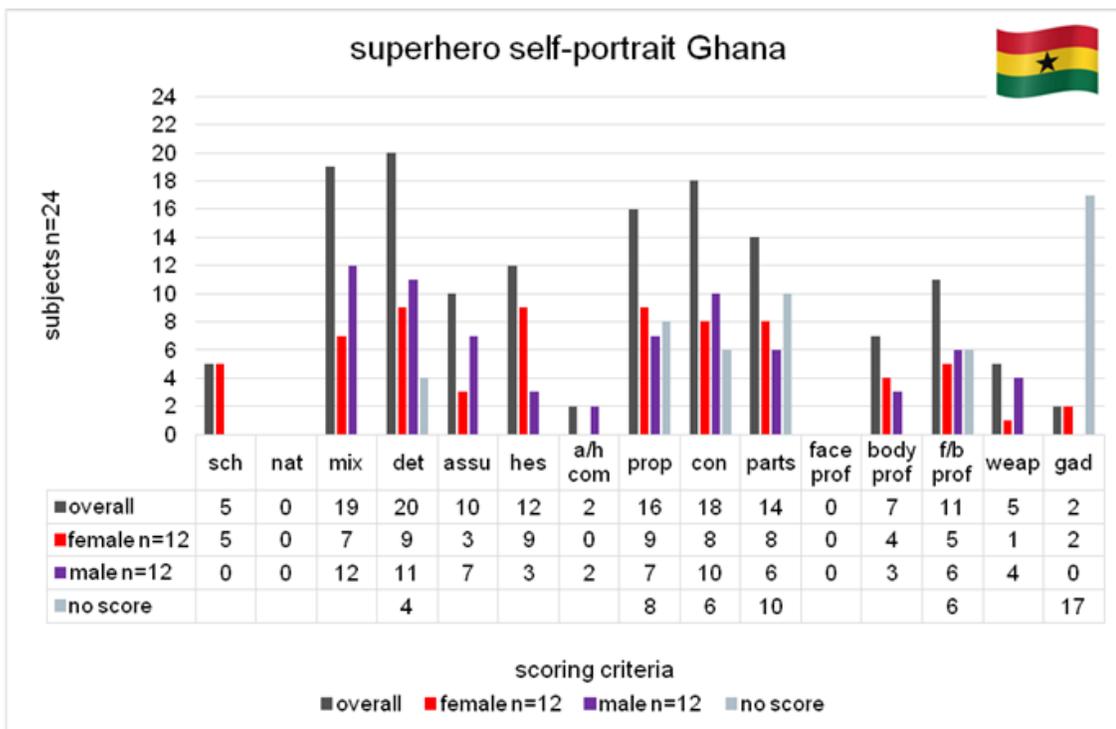
Composition of Drawings. Nine out of 12 females drew figures in proportion, 8 out of 12 used contour lines, 10 composed their figures in parts. Those females who drew in proportion did not favor any drawing style, yet 7 out of 9 and 8 out of 9 females who used contour and composed with parts, respectively, drew schematically as well. Males drew fewer figures in proportion than the females, namely, 5 out of 12 used contour, and 9 composed with parts. Yet, like the females, the use of proportion does not appear tied to a particular drawing style, but those males who used contour and composed figures in parts also predominantly used a schematic style.

Use of Profile. The 9 participants from Greece who used profile only scored for drawing the body in profile. Filtering the scores by drawing style, half of the Greek females drew the body in profile, although this primarily means drawing the feet in profile; of the 6 females who drew the body in profile, they were divided evenly between the schematic (3) and mixed (3) drawing style, and of the 3 males who depicted profile, 2 drew schematically and 1 mixed. Again, the drawing style does not necessarily link to the use of profile.

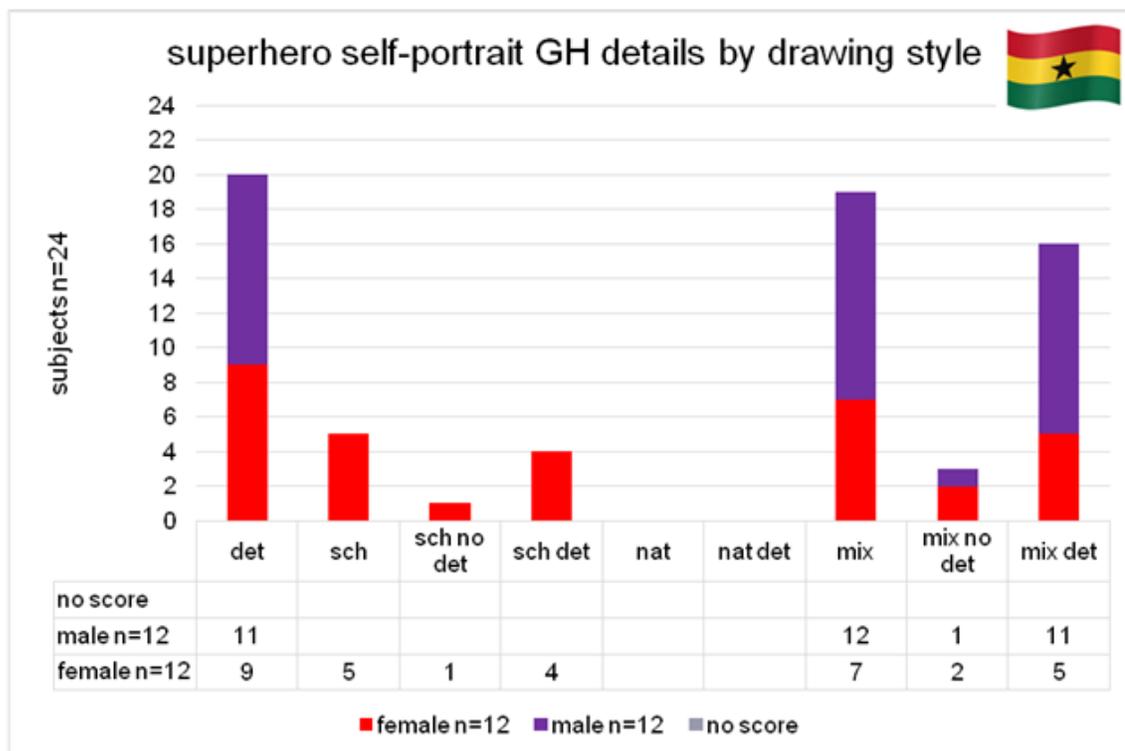
Weapons and Gadgets. In addition, none of the females portrayed having a weapon or gadget, while 3 males drew a weapon in schematics.

Superhero Self-Portrait: Ghana.

Figure 4.23. *Superhero Self-Portrait Ghana*



Ghana: Details. One-fifth (5) of the Ghana cohort drew schematically, whereas four-fifths (19) scored for using a mixed style of drawing (see Figure 4.23). No one from this cohort made a naturalistic style superhero self-portrait drawing. Broken down by gender, 5 females drew schematically and 7 mixed, whereas all 12 of the male participants in the Ghana cohort scored for using a mixed drawing style. Notably, the lack of detail included in the two preceding drawings, self-portrait and full self-portrait, but the Ghana subjects flips in this superhero self-portrait to 20 out of 24 subjects scored for including details. Of the five participants from Ghana who drew schematic superhero self-portraits all were female (5), and 4 out of the 5 also scored for adding details, while the 19 subjects who drew using a mixed drawing style included all 12 males and 7 females, most of whom added details, specifically 11 males and 5 females (see Figure 4.24).

Figure 4.24. *Superhero Self-Portrait Ghana Details by Drawing Style*

A possible explanation for this reversal is that Ghanaian subjects are required to wear uniforms and not to assert their individuality, as evidenced by the school norm that all students have close cropped hair until they graduate from high school. It is reasonable to consider the great amount of detail used in their depiction of their superhero self to be connected with the freedom to reimagine themselves.

Assurance of Drawings. The female (9) superhero self-portraits are more hesitantly drawn compared with the assuredness (7) of the male drawings. Even though the males all drew mixed superhero self-portraits whereas 5 females drew schematic and 7 drew mixed, the hesitancy seems to arise from an effort on the part of the females to draw more naturalistically, although their male schoolmates may have more drawing experience or be for some reason further along with their artistic development. The male score of 2 with a combination of assured and hesitant points to a striving toward naturalism by the males as well.

Composition of Drawings. Unlike the trend in the New York and Greek cohorts for drawing in proportion having no clear association with drawing style, yet using contour and drawing in parts was tied to schematic drawing, most of the Ghanaians who drew in proportion used a mixed style. Of the 16 who drew in proportion, 7 females as well as 7 males used a mixed style, while 2 females drew schematically. Compared with the other two countries, drawing the figure in proportion is a solid skill for these subjects in Ghana. Contour was scored for by 10 males using a mixed style, also indicating this a solid skill for them. Whereas 3 females drawing schematically and 5 females using a mixed style also used contour lines points to this being a developing skill for the females, although one they are striving to achieve. However, composing the figure in parts remains more a factor of schematic drawing, with only 6 males who drew with mixed style, 4 females schematic, and 4 mixed having rendered the figure in this manner.

Use of Profile. Most of the Ghanaian subjects (18) used profile; 7 depicted the body in profile, and 11 used full profile (face and body), leaving 6 no scores. Those who portrayed partial and full profile were nearly evenly distributed between male and female, and nearly all used a mixed drawing style except for 1 schematic. Five Ghanaian females used a schematic style for their superhero self-portrait, none of whom drew in profile, leading to the conclusion that the use of profile by the Ghanaian group is connected not only with the mixed style but is connected with more naturalistic depictions and is a product sought after by this group.

Weapons and Gadgets. One female drew a weapon with schematics, and 2 illustrated gadgets using a mixed style. Three males drew weapons, and 1 drew a weapon/gadget with a mixed style.

Superhero Self-Portrait Summary. We saw a dramatic reversal in drawing style from mixed to schematic by the New York cohort and the Greeks as well from the self-portrait to the full self-portrait, as the Ghanaians stood apart and maintained a more mixed style of drawing that speaks to intention toward naturalism. From the full self-

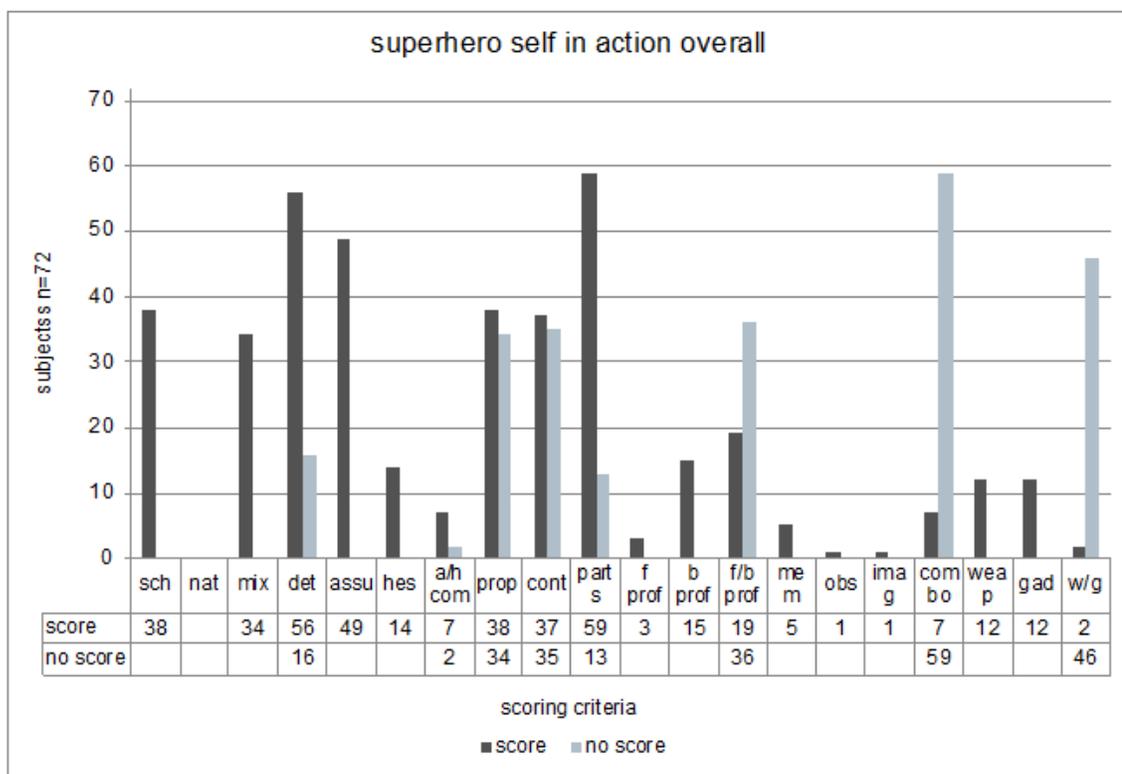
portrait to the superhero self-portrait, the drawing styles were relatively the same. Notably, the lack of detail included in the two preceding drawings, self-portrait and full self-portrait, by the Ghana subjects flips in this superhero self-portrait to 20 out of 24 subjects scored for including details. The New York and Greek females both draw with greater assurance, and the New York females, having scored high for both using a schematic drawing style and drawing with assurance, can be said to be comfortable and perhaps accustomed to using schematics. For New York and Greece, the results show drawing in proportion independent of drawing style, whereas using contour line and composing the figure in parts appears predominantly in schematically drawn portraits. However, for the Ghanaians, drawing the figure in proportion is part of their skill set. Using contour lines to render the figure is firmly in place for the males, and females are striving to achieve this. Composing the figure in parts is clearly a factor of schematic drawing. Of particular interest, the Ghanaians use dramatically more profile in their superhero self-portrait depictions than their American and Greek counterparts, which suggests a level of maturity and relationship to the natural world, to be discussed further in the next chapter.

Superhero Self in Action

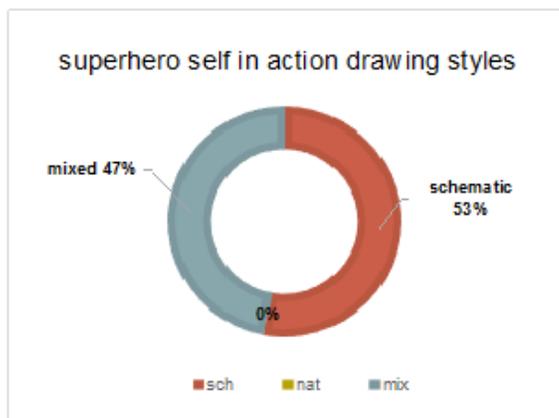
The third drawing task is the Action Drawing, for which subjects used a choice of pencil, colored pencils, markers, and/or crayons on 8-1/2x11-inch paper to draw a picture of themselves as their superhero-self rescuing victims from some kind of peril. These drawings were scored in two different categories: the superhero self in action drawing and action drawing in entirety (see Figure 3.4). The superhero self in action discussed in this section focuses upon the figure exclusively and employs the same scoring criteria as the superhero self-portrait.

Figure 4.25. Overall Results for Superhero in Action

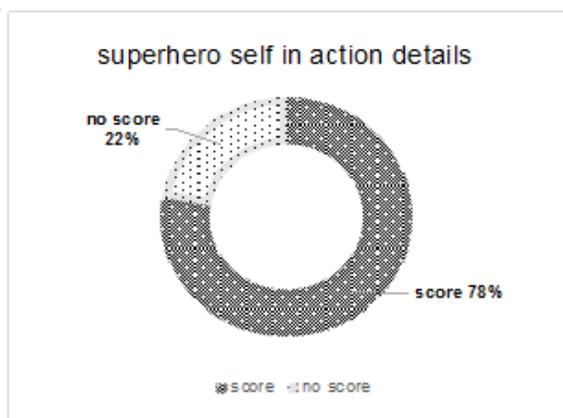
A



B



C



Note. Figure 4.25 contains overall superhero self in action results in three panels. Panel A: Bar graph of raw numbers. Panel B: Pie chart of drawing styles in percentages. Panel C: Pie chart of details in percentages.

By Gender

Drawing style results by gender for the superhero self in action figure drawing are similar to those of the superhero self-portrait by gender and do not reflect any notable departures from the general findings (see Figure 4.26). One NY female switched from using a schematic drawing approach to a mixed drawing approach only. The female score for details remained the same but for 1 fewer female adding details; however, 6 fewer males scored for adding details, bringing the totals for details by gender to 28 for both sexes. Significantly, fewer females and males scored for drawing hesitantly, as the numbers for drawing with assurance rose to 28 female and 21 males. A few less participants scored for their drawing being in proportion, leaving the numbers slightly but not significantly less, with 21 females drawing in proportion and 17 males. Yet 12 fewer subjects scored for using contour, bringing the results to 20 females and 17 males using

Figure 4.26. Results for Superhero Self in Action by Gender

A

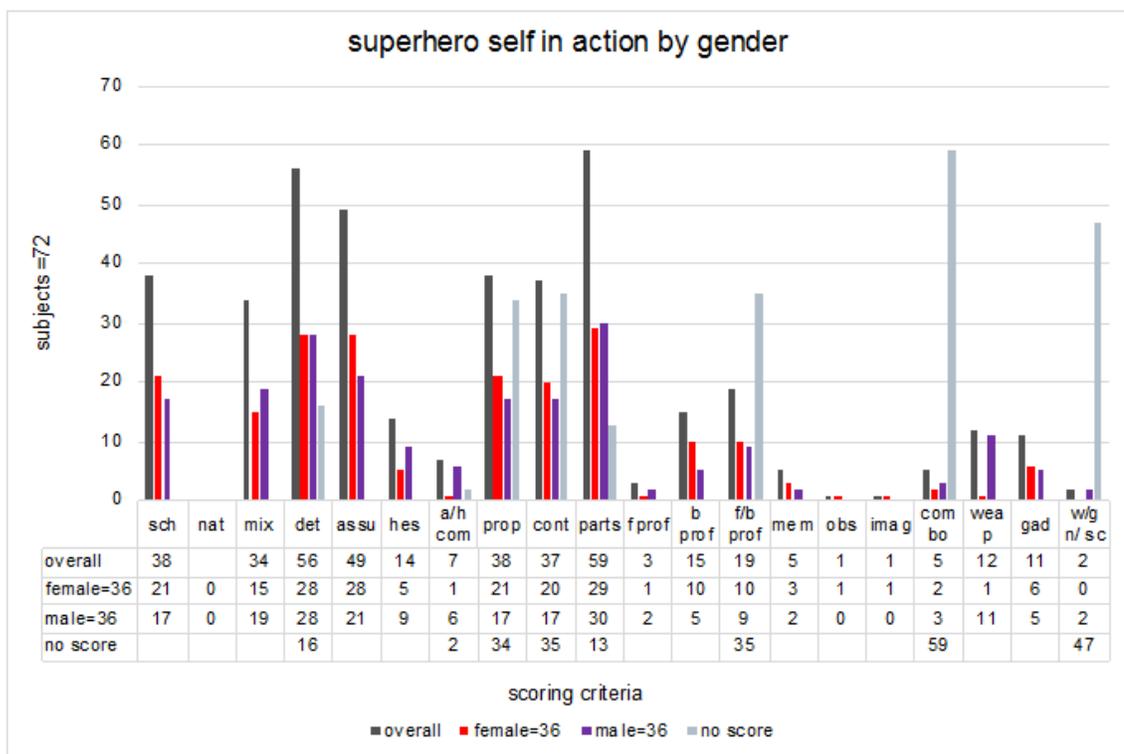
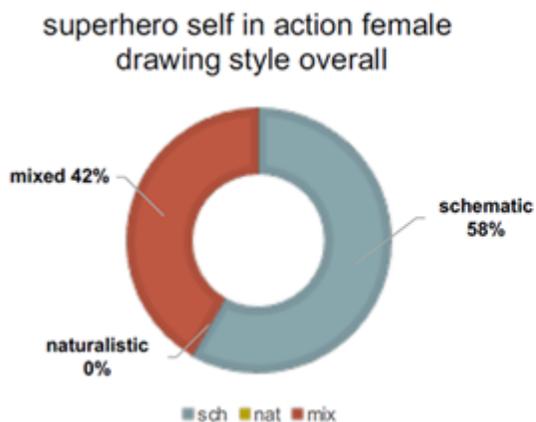
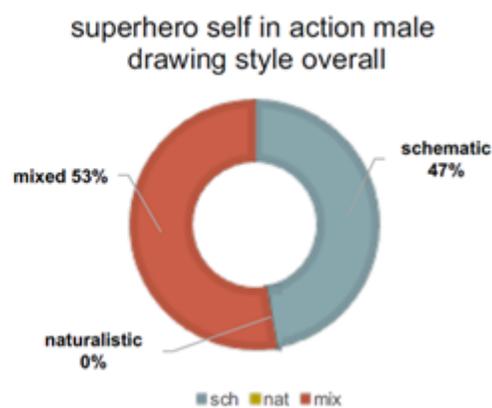


Figure 4.26 (continued)

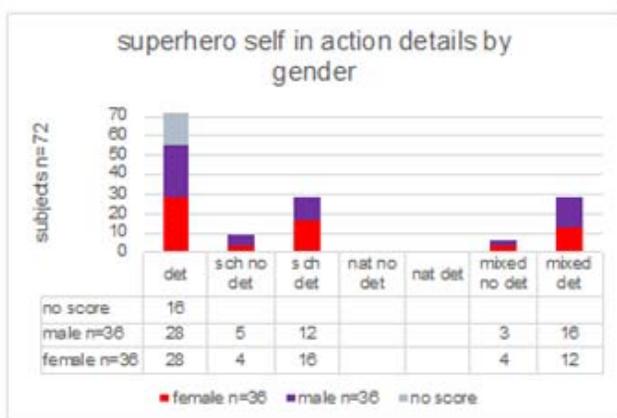
B



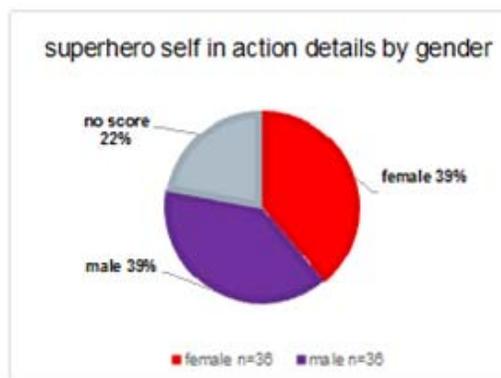
C



D



E



Note. Figure 4.26 contains overall superhero self in action results by gender in five panels. Panel A: Bar graph of raw numbers. Panel B: Pie chart of female style percentages. Panel C: Pie chart of male style percentages. Panel D: Bar graph of details by gender. Panel E: Pie chart of details by gender.

contour line in their figure drawing. As with the general results, the results by gender indicate a rise in the number of subjects composing figures in parts; however, there is not a dramatic difference between the performances by gender, with 28 females and 31 males. A greater number of females (9) drew the body in profile compared to males (5)

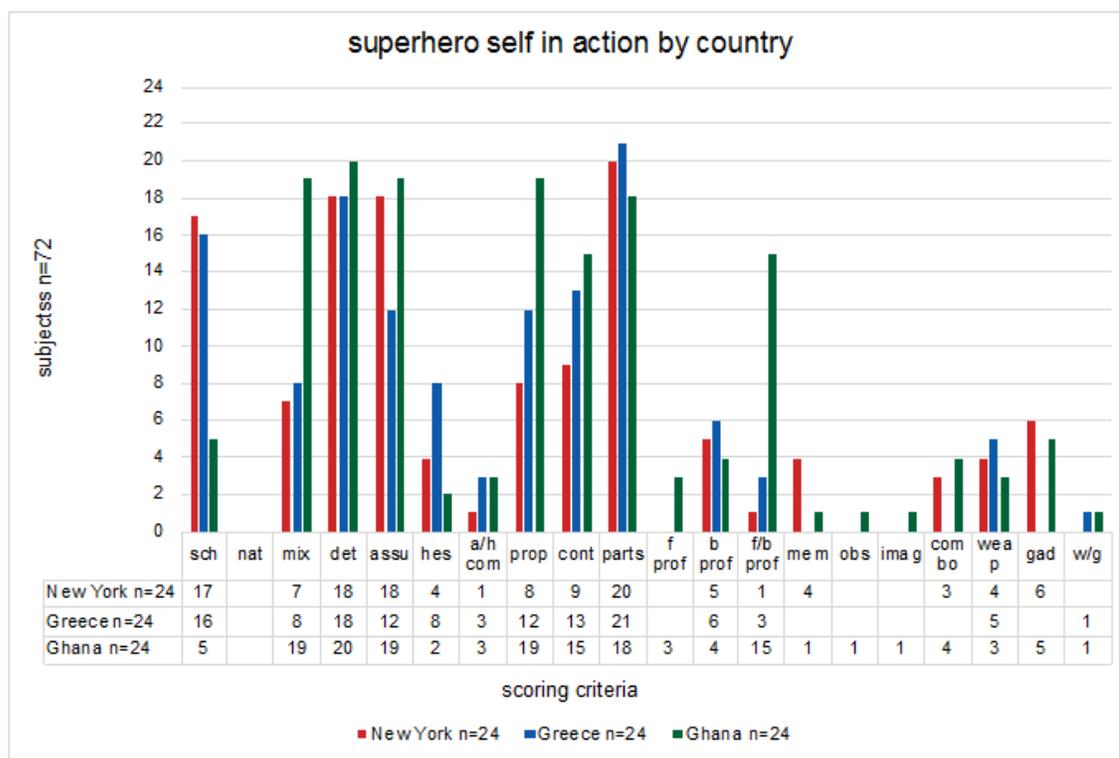
and full profile, with 10 females and 9 males, but again there is not a noteworthy gap between the sexes.

By Country

Results by country reflect a consistency in the drawing style used by the subjects across tasks from each location, with about two-thirds of the participants from New York and from Greece using a schematic drawing style and the other third employing a mixed manner of drawing for their action drawing figure (see Figure 4.27); whereas the results for the Ghanaians continue to differ strikingly from their fellows, with four-fifths of the cohort utilizing a mixed drawing approach and the remaining fifth using a schematic drawing technique to create their superhero-self in action figure. In terms of details, the subjects from New York and Greece scored less than in their previous superhero self-portrait, yet the Ghana cohort maintained their level for inclusion of detail. The drawings of all participants gained in assurance from the previous drawings, with the Ghanaians making the biggest leap from a score of 9 assured to 19 subjects judged to have drawn their superhero in action with confidence. In the category of drawing with hesitation, the Greeks scored the highest. However, this statistic is lower for all of the groups than in the previous superhero-self-portrait, markedly so for the Greek subjects, decreasing from 12 to 8 tentative drawings, and dramatically lower for the Ghanaian subjects, who scored 11 hesitant drawings in the superhero-self-portrait task and only 2 for the superhero self in action. The New York scores for drawing proportionately and drafting the figure using contour line both dropped considerably in comparison with the Greek scores for these two criteria, whose corresponding results remained constant across tasks from superhero-self-portrait to the superhero self in action drawing. The Ghanaian cohort's score rose for use of proportion from the superhero self-portrait drawing to the superhero self in action. Interestingly, the subjects from Ghana used less contour to delineate figures in their superhero in action drawings and more often composed figures as parts, even though their

scores for use of profile increased. In fact, a greater occurrence of representing the figure in parts happened across all three countries. A shift of weight in scores occurred for the appearance of figures from partial to full profile and the rendering of weapons and gadgets increased slightly in the superhero self in action drawings.

Figure 4.27. *Superhero Self in Action by Country*

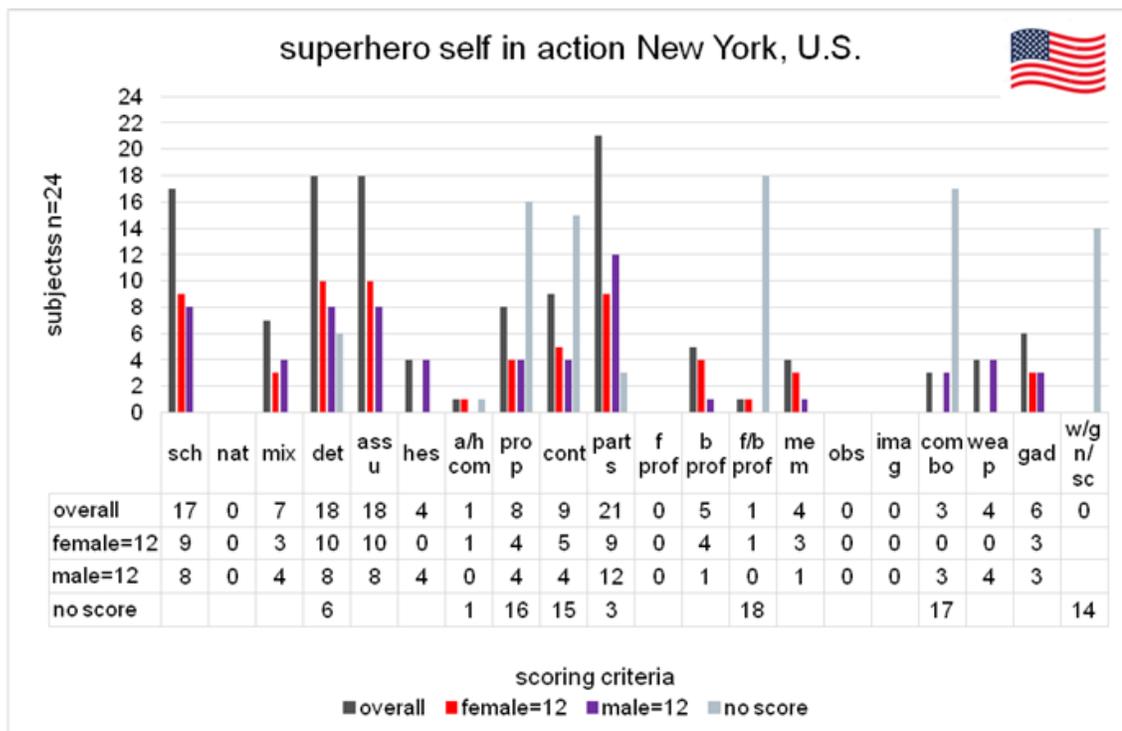


Details and Criteria Clusters by Drawing Style

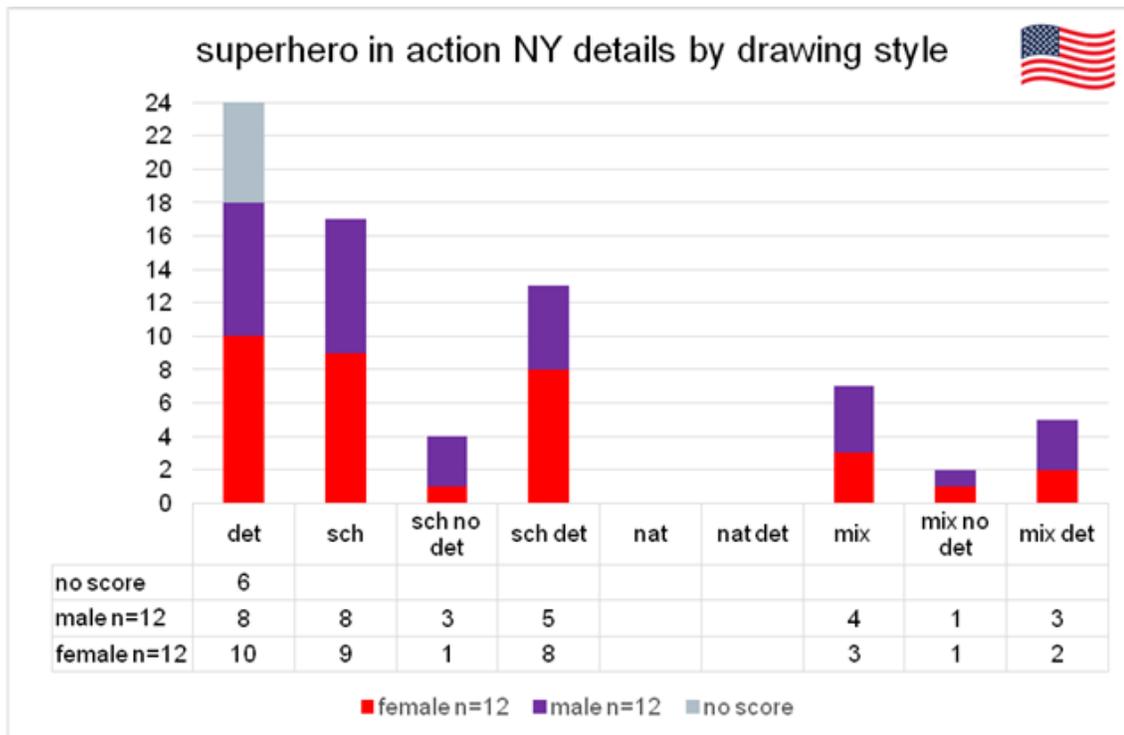
This section is organized in the same manner as the previous with two charts for each country: New York, Greece, Ghana. The general superhero self in action chart shows overall results and by gender for each respective country. The second chart shows the details category expanded by drawing style. Results for additional criteria will be discussed in the narrative. Please note that the criteria cluster for details drawn from memory, observation, imagination or a combination yielded low scores and therefore were not cross-referenced by drawing style.

Superhero Self in Action: New York.

Figure 4.28. *Superhero Self in Action New York*



New York: Details. The majority of subjects from New York continued to use a schematic manner of drawing for the superhero self in action except for one female from New York who formerly drew schematically but switched to a mixed drawing approach (see Figure 4.28). Concerning addition of details, the number of males adding details decreased by a third (4) from the superhero self-portrait, and 3 out of the 4 drew schematically, indicating that fewer males who used schemas added details. Almost all of the females added details no matter which drawing style they used (see Figure 4.29).

Figure 4.29. *Superhero in Action New York Details by Drawing Style*

Assurance of Drawings. Regarding assurance in drawing, nearly all of the females scored for having assurance, except for one who scored a combination of assured and hesitant, reinforcing the view that females from New York are confident in their use of the schematic drawing style. The males are generally less assured in their drawing than the females and especially when using a schematic drawing approach. Four females used profile in drawing their action figure, and of the 4, 3 used profile in a schematically rendered drawing, whereas only 1 male scored for using profile in a mixed drawing approach.

Composition of Drawings. Fewer females are using contour than before to draw their superhero in action, yet the same number of females composed the figure in parts. The males scored less for proportion and use of contour line, but 4 more males composed the body in parts from the superhero self-portrait, (still) bringing the total of males using parts to 12.

Use of Profile. Of 6 participants from New York who used profile, 3 of the 4 females who showed the body in profile drew schematically. The 1 male who drew the body in profile used a mixed style, and the 1 female who drew both the face and body in profile used schemas.

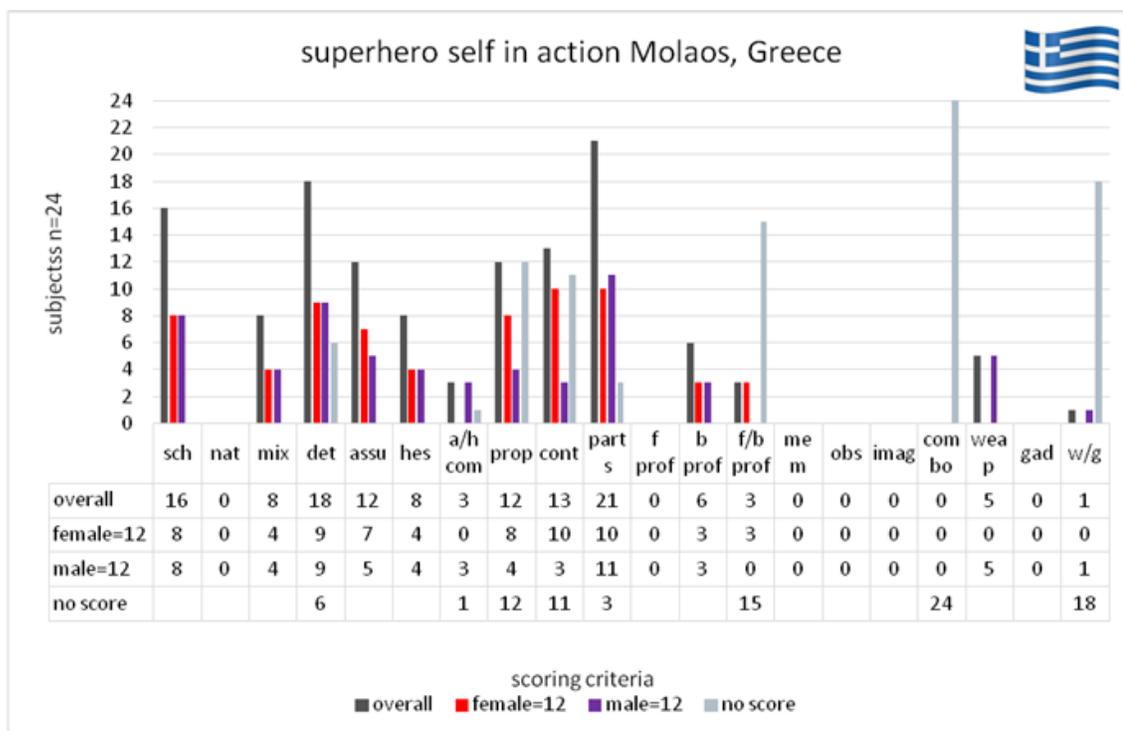
Weapons. Three females and 3 males all using a schematic style portrayed themselves with gadgets, and 4 males included weapons in their superhero self in action drawings, 1 schematic and the other 3 using a mixed style. The division among styles, gadgets illustrated by schematic drawers, and weapons using a mixed style may be indicative of the themes participants chose for showing their superhero rescuing people. The more schematic drawers depict non-violent interventions, whereas subjects using a mixed style depict violence (see Figure 4.30).

Figure 4.30. *Depiction of Weapons by Drawing Style: # 49 Mixed Style (left), #10 Schematic Style (right)*

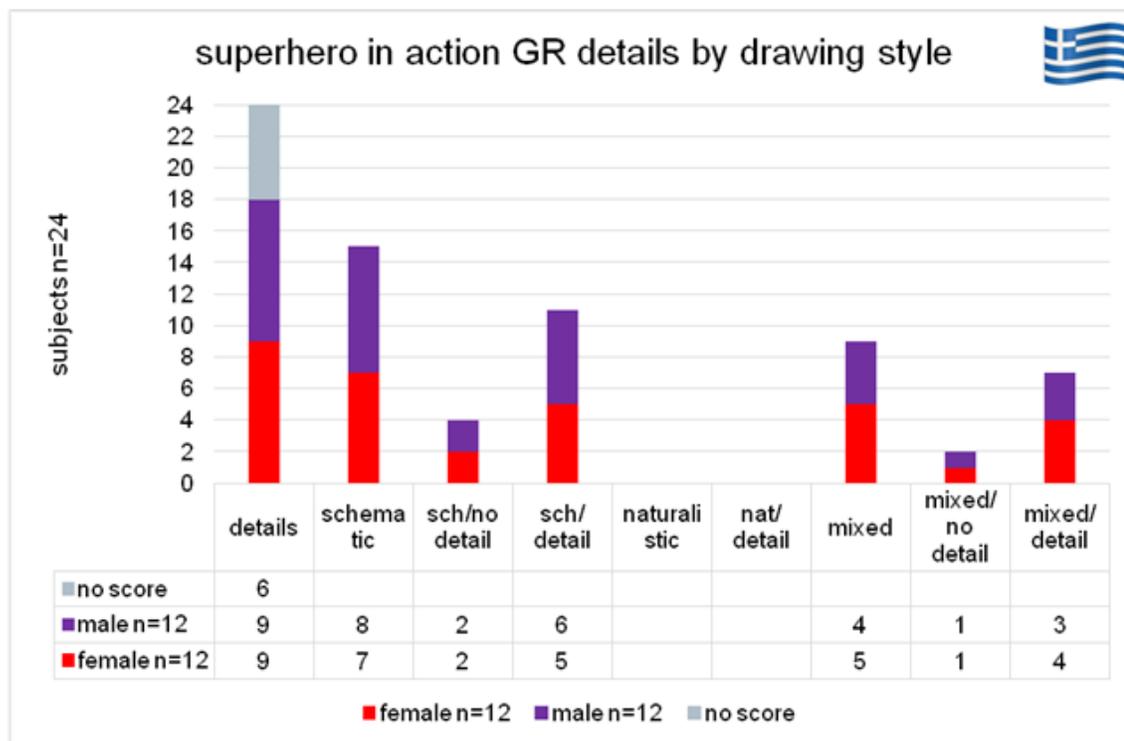


Superhero Self in Action: Greece.

Figure 4.31. *Superhero Self in Action Molaos, Greece*



Greece: Details. The Greek results for the superhero-self in action drawing show little change from the previous superhero self-portrait drawing, with 16 schematic drawings and 8 mixed in style, and a few less drawings made with details (see Figure 4.32). Yet whether drawing using a schematic or mixed style, three-quarters of the Greek subject still included details in their drawing of themselves as a superhero in action, with the numbers for males and females being nearly even.

Figure 4.32. *Superhero in Action Greece Details by Drawing Style*

Assurance of Drawings. The Greek males scored more for drawing with confidence than previously with style not appearing to play a role.

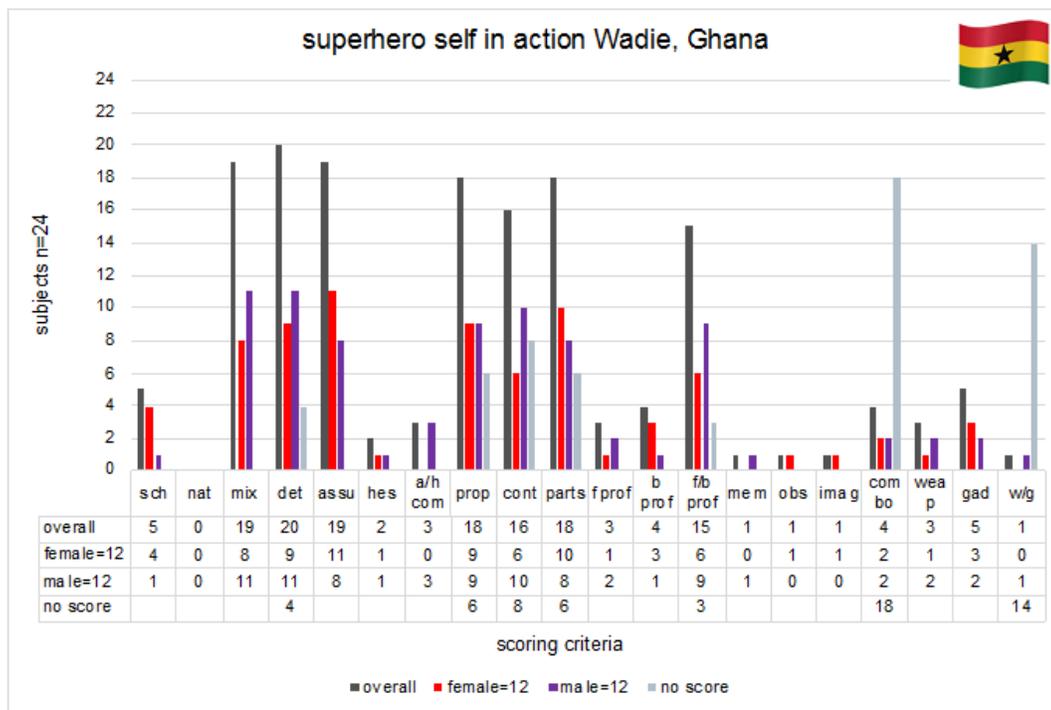
Composition of Drawings. There was a rise of males who drew schematically using contour and composing the figure in parts.

Use of Profile. Some of the Greek females moved from drawing just the body in profile to drawing the figure in full profile in the action drawing, but not the males. All 6 Greek females who drew their superhero self in action in partial or full profile did so using a mixed drawing style with assurance.

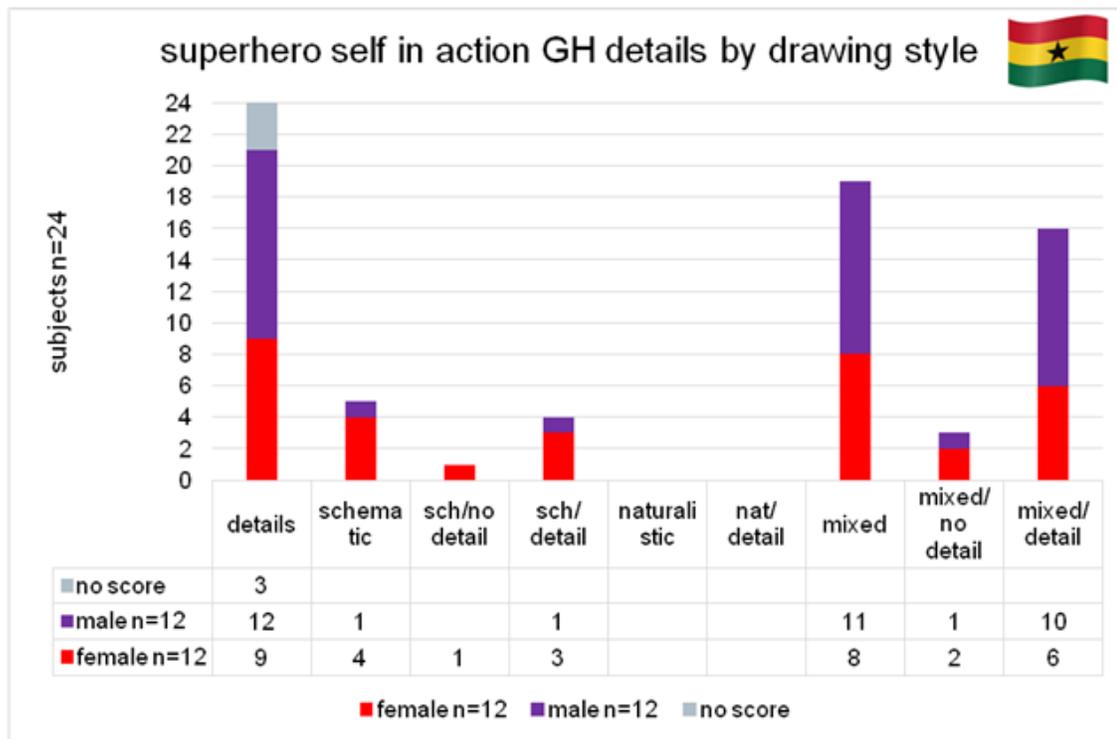
Weapons and Gadgets. Five males illustrated themselves with weapons, 4 schematic and 1 mixed, and 1 was scored for weapon/gadget also mixed in style by all three judges.

Superhero Self in Action: Ghana.

Figure 4.33. *Superhero Self in Action Wadie, Ghana*



Ghana: Details. Five Ghanaians, 4 females and 1 male, used a schematic style, and 11 males and 8 females used a mixed style to draw their superhero self in action (see Figure 4.33). Four out of 24 Ghanaians did not add details, 3 females, 1 schematic and 2 mixed, and 1 male, mixed. As most Ghanaian participants included details in their drawing, it follows that type of drawing style is independent of absence or presence of details (see Figure 4.34).

Figure 4.34. *Superhero Self in Action Ghana details by Drawing Style*

Assurance of Drawings. Worthy of attention is the result for assurance of drawing. There was a sizable shift in female assurance from the superhero self-portrait, with 2 scores for assurance, to the superhero-self in action, with 11 females scoring for assured drawing, 3 using a schematic style, and 6 using a mixed style of drawing. All 8 of the males who scored for assurance drew with a mixed style of drawing.

Composition of Drawings. Both female and male subjects from Ghana scored for drawing figures in proportion. Males by a 2:1 ratio with females used contour to describe the figure in action, as fewer females drew their superhero-self using contour lines than they did for the superhero-self-portrait drawing task.

Use of Profile. A greater number of participants from Ghana used full body profile for the action drawing. There was a shift from portraying the figure with just the body in profile to depiction of the figure using full body profile as would be expected in images of moving figures.

Weapons. More weapons and gadgets were scored for in the action drawing than in the superhero self-portrait. The Ghanaians scored 3 with weapons, 1 female and 2 males using a mixed drawing style; 5 with gadgets: 2 females schematic, 1 mixed, and 2 males mixed. One male with a weapon/gadget used mixed style.

Superhero Self in Action Summary. The scores for drawing styles used by the three groups have remained nearly the same as the style used to draw the superhero self-portrait, with only one NY female moving from schematic to mixed style, and GH styles scores identical. Inclusion of details declined slightly for NY and GR, while GH remained the same. NY and GR drew less proportionately, and GH increased proportionality. However, the number of drawings made with assurance had increased overall, perhaps an indication of the participants developing confidence through practice. More figures were being composed in parts and fewer using contour than was done in the superhero-self-portrait. Notably, many figures were drawn in full face and body profile, most likely a consequence of the shift from drawing a static figure to one that is in motion and possibly connected to amount of experience observing the natural world. In addition, more figures were depicted wielding weapons and gadgets, which may also be due to the task goal of illustrating a crime being averted, as the rationale for showing a weapon. The illustration of weapons is predominantly male, although style trends differ from country to country, as most males with weapons from NY drew mixed style, whereas from Greece most males used schematic style and drew weapons. However, the use of weapons and gadgets was dispersed in the Ghanaian cohort across styles and gender.

Action in Entirety

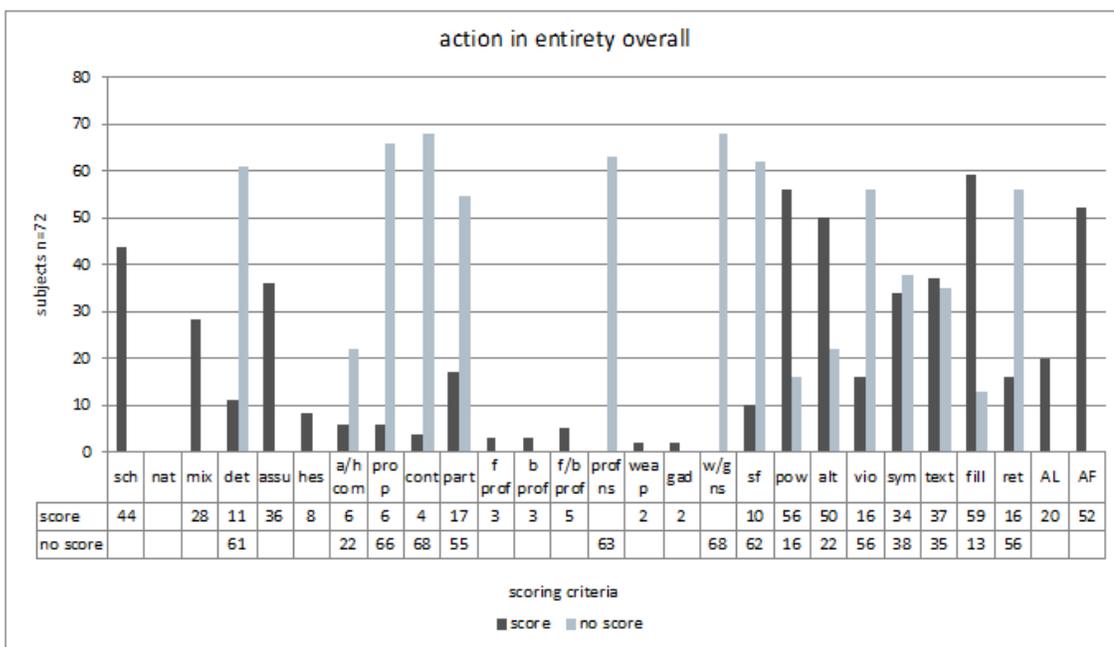
The Action in Entirety drawing is the fifth and last category for scoring on the protocol chart used by the three judges. For this category, the scorers were asked to consider the third drawing task as a whole. The criteria used by the judges included the

items used for the superhero self in action plus were expanded to include categories for visual representation of stick figures, super/magic powers, saving/helping people, violence depicted, symbolism/conventions, speech bubbles, outline filled, drawn and traced, action localized or fills the page (see Figure 4.35).

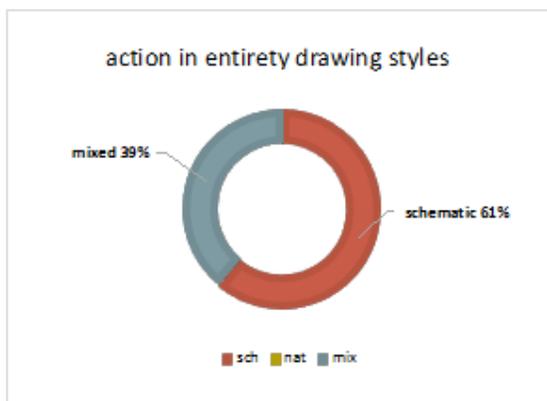
Overall, from the scores for the superhero self in action to the action in entirety, there has been an additional shift from mixed to schematic drawing style. For the superhero self in action, the overall scores were 38 schematic and 34 mixed, whereas the scores for the action in entirety were 44 schematic and 28 mixed approach to rendering the image. The score for details dropped considerably, with only 11 action drawings scored for including details and 61 no scores; therefore, these will be mentioned without a separate chart. About half of the drawings were scored (36) as being assured, with the score for hesitant having dropped from 14 to 8. The scores in the categories for proportion, contour, composed as parts, partial and full profile, weapons and gadgets dropped off drastically, leading to eliminating these categories from consideration moving forward with the results for the action drawing. Only 10 participants used stick figures. Fifty-six out of 72 depicted their superhero using super or magic powers, and 50 out of 72 illustrated saving or helping people. In 16 of the drawings, violence is shown. Half (37) of the subjects employed speech bubbles in their action drawing. A majority (59) of the participants drew in pencil and then filled in the lines with color. Only 16 subjects drew and then retraced their drawing to redefine the contours. Twenty-one subjects localized the action in the action drawing and filled the page to the edges.

Figure 4.35. Overall Results for Action in Entirety

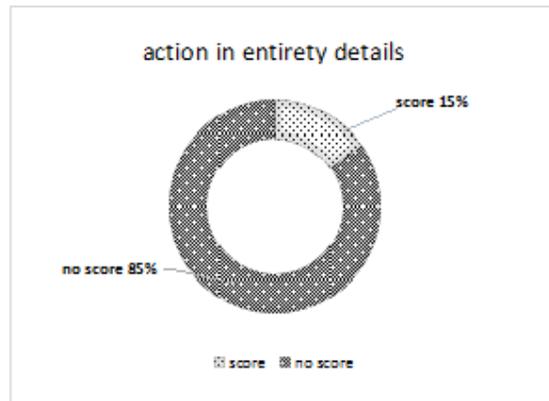
A



B



C



Note. Figure 4.35 contains overall action in entirety results in three panels. Panel A: Bar graph of raw numbers. Panel B: Pie chart of drawing styles in percentages. Panel C: Pie chart of details in percentages.

By Gender

By gender, more females drew schematically, and more males drew using a mixed style. Indeed, overall the females scored higher for schematic than males in every drawing category except for the first drawing, the self-portrait from observation, where

the males scored higher for using a schematic style, and a greater number of females drew with a mixed style of drawing (see Figure 4.36). Of those adding details, the majority are female (see Figure 4.37). Male and female scored 28 each for depicting super powers in their action drawings. More females than males showed people being saved. Fifteen males scored for depicting violence compared to just 1 female. Females also used symbolism more often than the males; however, more males used speech bubbles or text. Males and females scored about the same for drawing in pencil then filling in and drawing then retracing. More females than males filled the page.

Figure 4.36. *Overall Results by Gender for Action in Entirety*

A

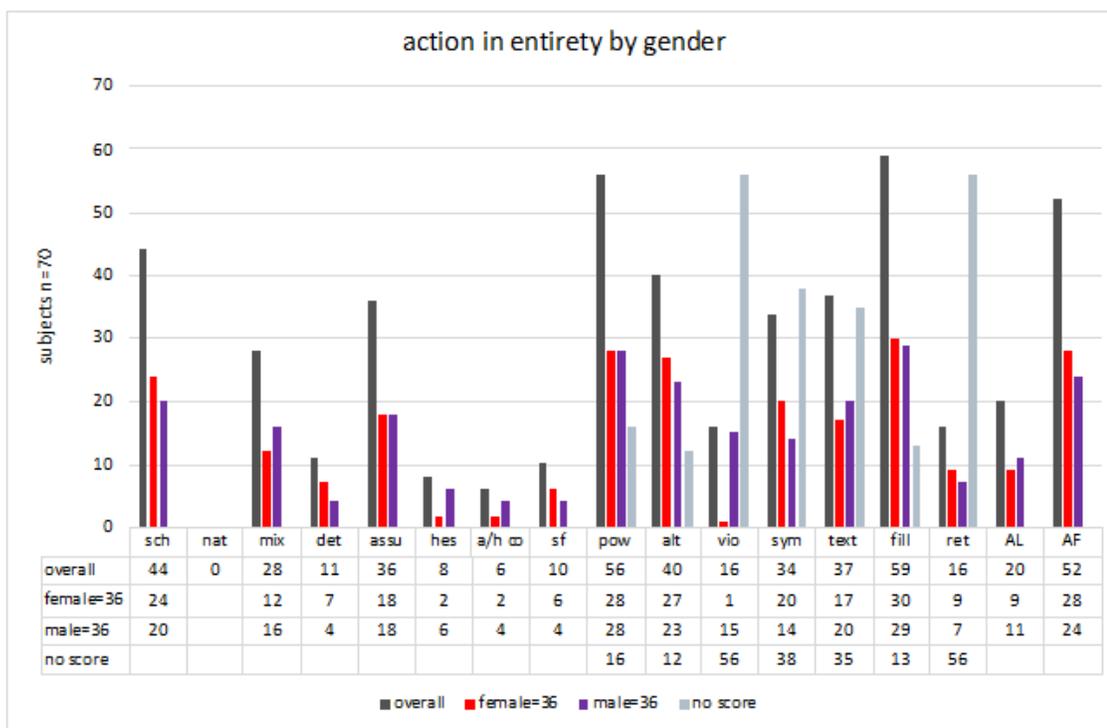
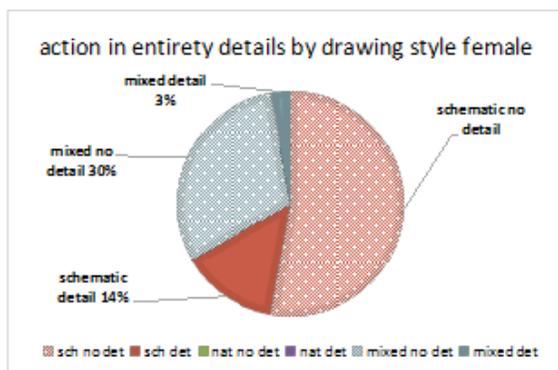
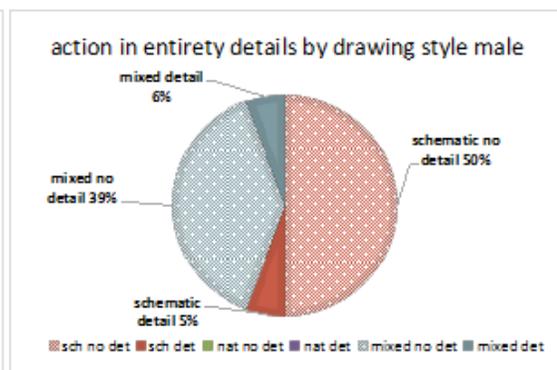


Figure 4.36 (continued)

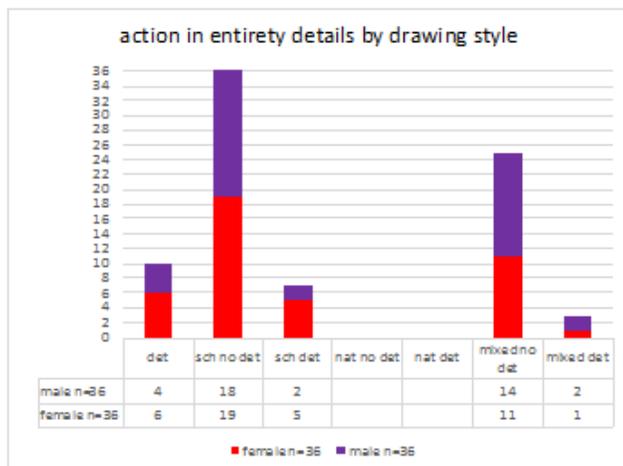
B



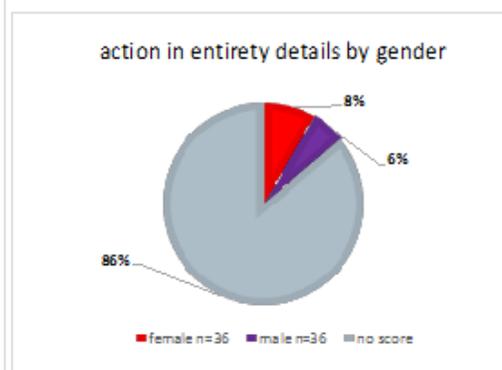
C



D



E



Note. Figure 4.36 contains overall action in entirety results by gender in five panels. Panel A: Bar graph of raw numbers. Panel B: Pie chart of female style percentages. Panel C: Pie chart of male style percentages. Panel D: Bar graph of details by gender. Panel E: Pie chart of details by gender.

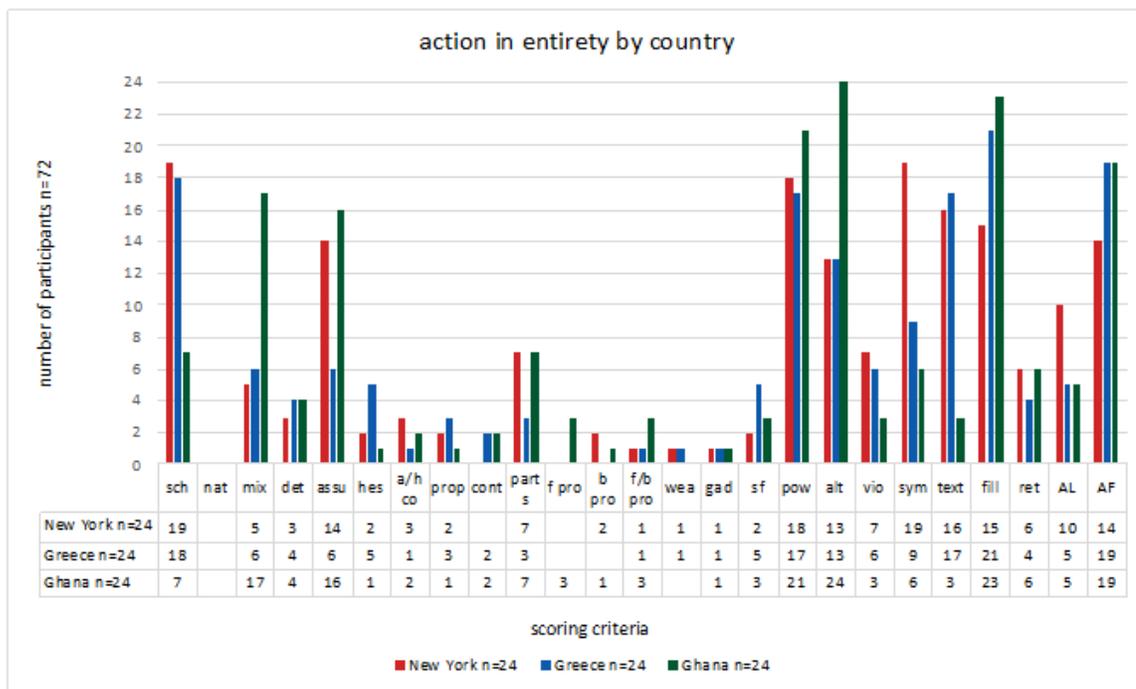
By Country

The drawing style scores for the cohorts from New York and Greece moved to more schematic, with New York scoring 19 schematic, 5 mixed, and Greece 18 schematic, 6 mixed, whereas the Ghana cohort scored 7 schematic and 17 mixed in style (see Figure 4.37). The scores for details included in the action drawing in entirety are low across all three countries, indicating that although the action figures were rich in detail

with scores of 18, 18, and 23 for New York, Greece, and Ghana, respectively, the background of these drawings received considerably less attention, with scores of 3, 4, and 4. Since the results for details in the action in entirety drawings was not robust, these findings are discussed but not presented in figures.

New York (14) and Ghana (16) maintained fairly high scores for assuredness in drawing, while Greece's score dropped to only 6 from 12 for the previous drawing. By a narrow margin the Greek cohort used more stick figures, but in general there is not a large proliferation of stick figures in these drawings. The scores are also close for showing super or magic powers, with Ghana leading with a score of 21. Noteworthy are the scores for depiction of saving or helping people, with every member of the Ghana cohort reported to have shown a rescue compared with slightly more than half of the New York (13) and Greek cohorts (13) showing people being saved. The Ghanaians only had 3 drawings with violence, whereas New York had 7 and Greece had 6 drawings showing an act of violence. Symbolism in the form of using conventions and labels abound in the drawings from New York with a score of 19, while Greece scored 9 and Ghana 6. The Greek cohort used the most speech bubbles and text in their drawings (18) followed closely by New York with 16 and Ghana with only 3 drawings that included a form of symbolism. Most of the participants drew in pencil and then filled in with color, with 15 New York, 21 Greece and 23 from Ghana. Most of the participants filled the page with action.

Figure 4.37. Results for Action in Entirety by Country

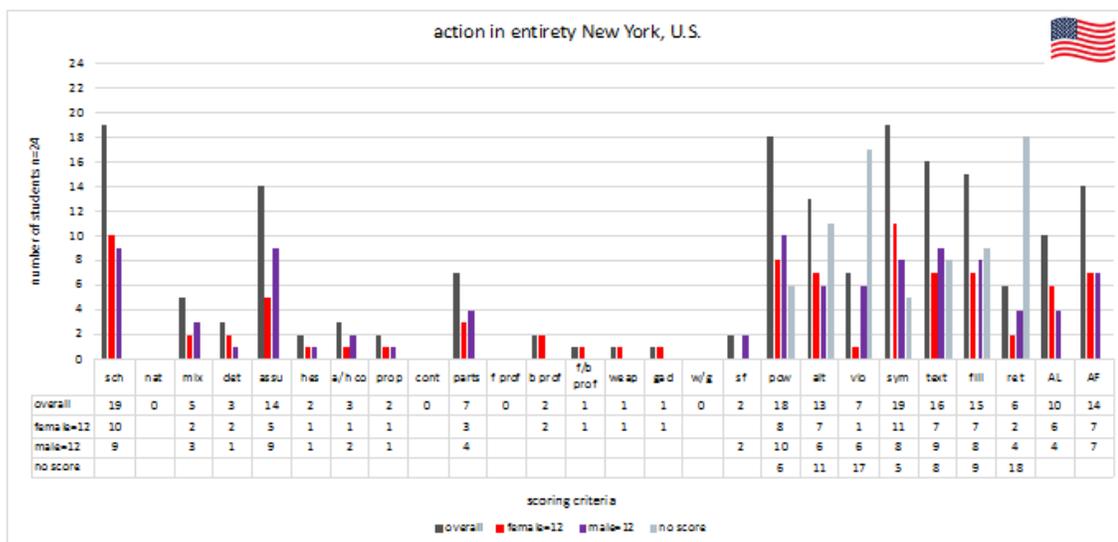


New York. As has been the steady trend across drawing tasks, subject scores have shifted once again away from a mixed style toward being more schematic in style (see Figure 4.38). Two females and 1 male included details drawn schematically. There has been a flip in the scores for assuredness from 10 females and 8 males drawing their superhero self in action with confidence to the entire action drawing being drawn confidently by 5 females and 9 males.

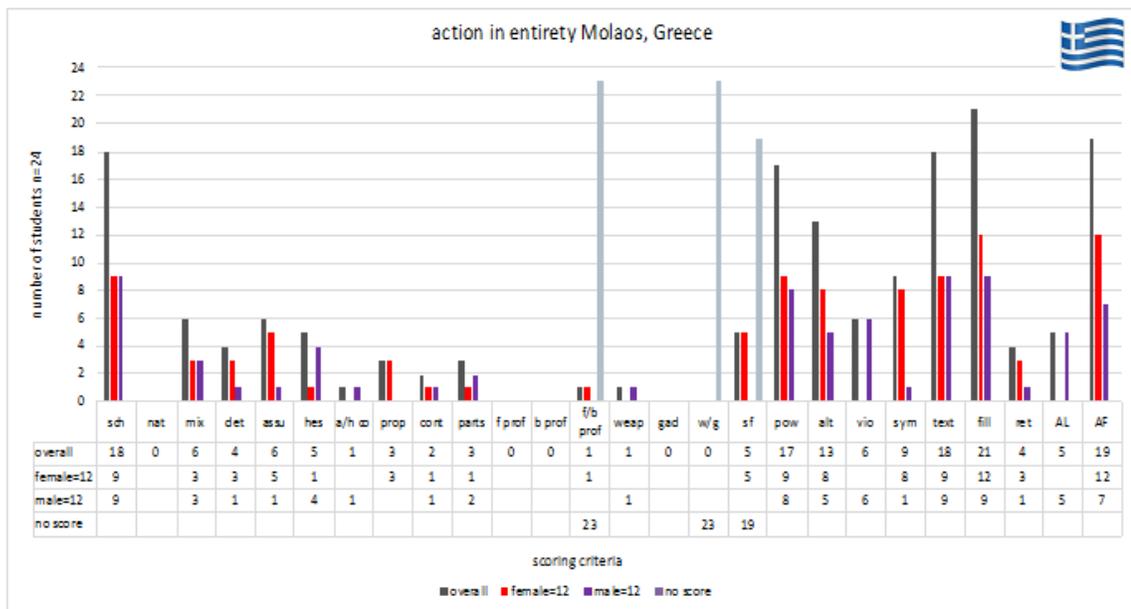
Only 2 males from New York drew stick figures. More males illustrated super powers in their drawing, but more females depicted people being saved. Worth noting are of the 19 who used symbolism, 11 were females and 9 used schemas, plus 8 males of whom 5 used schemas, thereby tying the use of conventions and labels to schematic drawing. Interestingly, not many subjects from New York drew in pencil and filled in their drawing with color, nor did many draw and retrace their drawing for emphasis. Using pencil and then filling in with color is tied to schematic drawing for both genders in the New York cohort. When the action is localized in the action drawing, both females

and males draw schematically compared to when the action fills the page the drawing styles are divided between schematic and mixed regardless of gender.

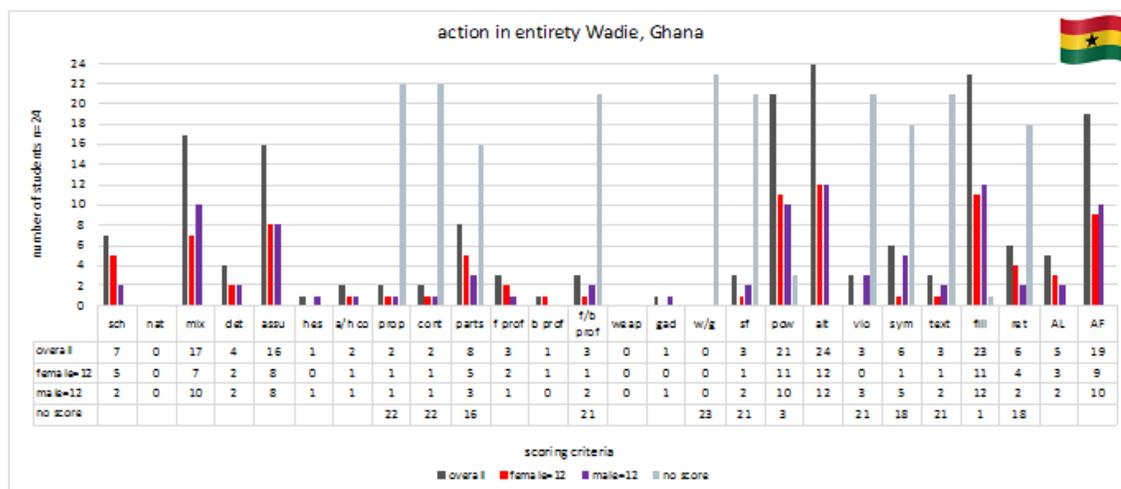
Figure 4.38. *Action in Entirety New York, U.S.*



Greece. The Greek drawing style shifted to schematic only by 1 female and 1 male. Adding detail dropped from 18 for the superhero figure in action to 4: 2 females added schematic details, 1 female and 1 male mixed. Stick figures were only used by females: 4 schematic and 1 mixed. The Greek cohort's portrayal of a super or magical power is distributed proportionately with the drawing style outcomes. Showing people being saved is more weighted to females with 5 schematic and 3 mixed compared with males: 3 schematic and 1 mixed. Six males depicted violence evenly by style, 3 schematic, 3 mixed. The majority of symbolism used was by Greek females, 7 schematic and 1 mixed, whereas only 1 male scored for symbolism using a mixed style. Using text is evenly distributed by gender in Greece but mainly used by both with a schematic style. Not many Greeks retraced their lines, but most drew and colored in their lines using a schematic style by 8 females and 7 males out of 20 who scored. Nineteen filled the page with action, notably all of the females and 7 males (see Figure 4.39).

Figure 4.39. *Action in Entirety Molaos, Greece*

Ghana. From the Ghanaian group, 1 female and 1 male each switched from mixed to schematic for the action in entirety drawing, bringing the tallies to 7 schematic and 17 mixed style. One female and 1 male added schematic details, and 1 female and 1 male added mixed style details. Sixteen scored for assurance, 3 fewer females than for the superhero in action. Only 3 used stick figures. Twenty-one showed super or magical powers, with 4 females using schematics, 7 mixed, and males just 1 schematic and 8 mixed. All of the Ghana cohort illustrated saving people. Three males depicted violence. One female and 1 male used symbolism with schemas, and 5 males used symbolism with a mixed style. Only 2 males used text. All of the cohort drew and then filled their illustration with color. Four females and 4 males each retraced their pencil lines with a marker. Nineteen took their drawing to the edges of the paper: females 3 schematic, 6 mixed, and all 10 males using mixed styles (see Figure 4.40).

Figure 4.40. *Action in Entirety Wadie, Ghana*

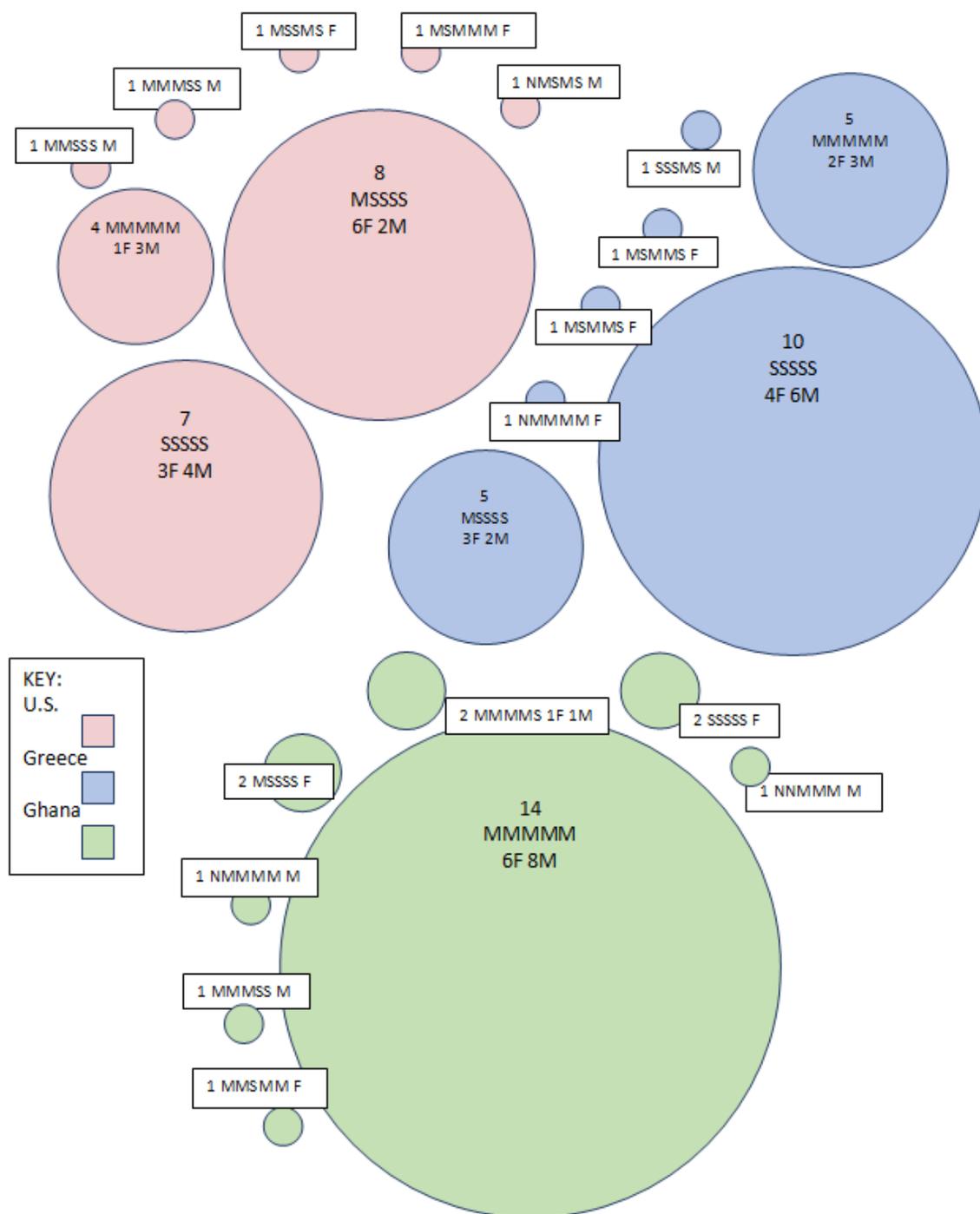
Action in Entirety Summary

A few more participants slid back from a mixed to schematic style of drawing across the cohorts, bringing the totals to 44 schematic and 28 mixed style of drawing. Far less attention was paid to details than in prior drawings. The level of assurance in the making of the drawings also dropped from 49 to 36 by 4 New York, 6 Greece, and 3 Ghana. Interestingly, the American males and the Greek females were more assured in their drawing than their respective counterparts; however, the Americans were confident using schemas and the Greeks using a mixed style. The Ghanaians were evenly divided between male and female for assurance, except the males all showed confidence with the mixed style whereas the females were divided: 3 schematic and 4 mixed. There is not a preponderance of stick figures in these drawings. Most of the participants illustrated the use of super or magical powers, but only slightly more than half of the New York and Greek groups showed coming to people's aid, and of those that did, most were female. By comparison, all of the Ghanaians drew people being rescued. Many of the New Yorkers (16) and Greeks (17) used text mostly schematic, in contrast with just two Ghanaians using text both male, 1 schematic the other mixed. Sixteen scored for showing violence, mostly male, with 7 from New York, 1 female and 6 males, 6 Greek males, and

3 Ghanaian males; the drawing style did not create an obvious pattern. Conventions and labels were used for symbolism mostly by NY and Greek females drawing with a schematic style. Not surprisingly, most of the drawings from all three groups were drawn in pencil and then colored in. Retracing pencil lines with marker as a finishing touch was most prevalent in the Ghanaian work. In general, participants who localized the action in their drawing used a schematic style, whereas the majority of participants took their drawing to the edges of the paper with style appearing to be inconsequential.

Part II: Style Profiles

Recognizing that the results of importance begin with the drawing style used by each subject, the researcher created a drawing style profile for each participant using the scores received by each subject for either schematic (S), naturalistic (N), or mixed drawing (M) style under each of the five headings: self-portrait, full self-portrait, superhero-self (center of triptych), superhero self in action drawing, and action drawing in entirety. For example, a style profile NNMMM indicates that the participant's self-portrait and full self-portrait received a score of naturalistic and the superhero-self, superhero self in action drawing, and action drawing in entirety were scored mixed style. The researcher then grouped like style profiles together, from which emerged sets of subjects by drawing style as follows: MMMMM, SSSSS, MSSSS, MMMSS, NMMMM, MMMMS, MMSSS, MSSMS, MSMMM, NNMMM, MSMMS, MSMSS, NMSMS, SSSMS, MMSMM. All of the profile groups are represented in Figure 4.41.

Figure 4.41. *Frequency of Style Profiles by Country and Gender*

Part III: Details Classification Charts

Since the data results indicating scores for details being present or not were of particular significance by country and by gender, depending upon the drawing and drawing style, further investigation was made. The researcher went back and gathered all of the notes made by the judges about details on their scoring sheets including her own. The details were then sorted out by type to arrive at the following categories: cultural, clothing, facial, guideline, hairstyle, insignia, label, other, speech bubble, symbolism. A protocol chart was created with an entry for every subject in the study with his or her own set of rows for each of the five drawing categories: self-portrait, full self-portrait, superhero self-portrait, superhero in action self, and action drawing in entirety running down the chart. Across the chart a column was designated for each type of detail with the first column reserved for charting the specific drawing style for each drawing by each participant as scored by the judges. Once the chart was filled out completely, it was converted to a pdf file and exported into NVivo software, from which it was possible to generate statistics with general results as well as organized in various matrices according to country and drawing style profile. The following charts show the overall results for details, results by country, and then for the three largest drawing style profiles, namely, for the groups MMMMM, SSSSS, and MSSSS.

Figure 4.42. Overall Details Chart

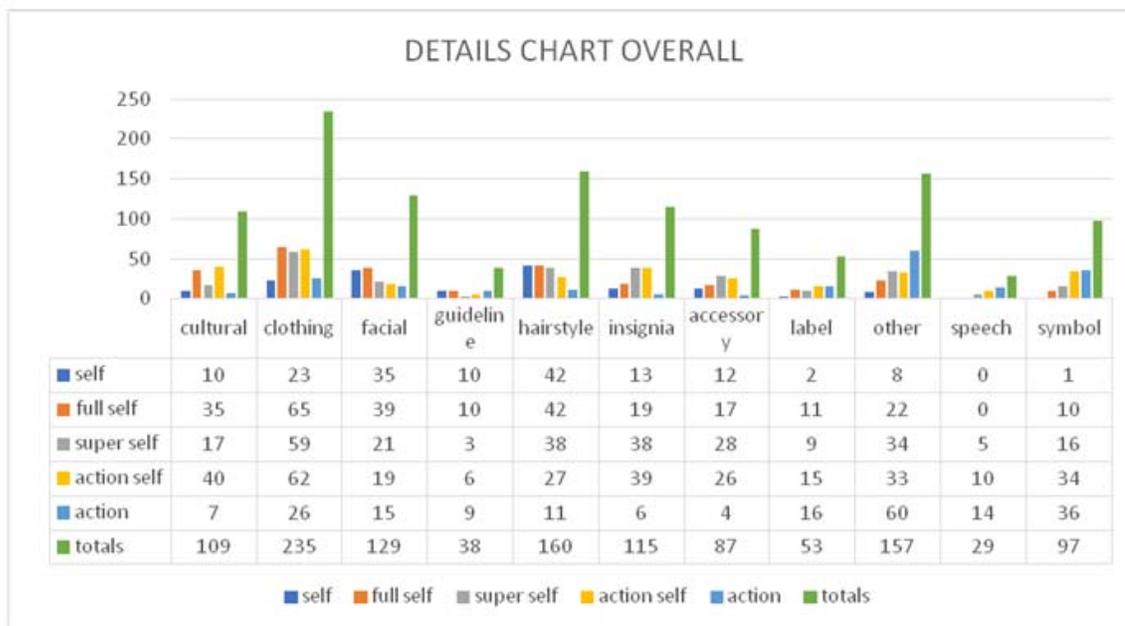


Figure 4.43. Details Chart New York, U.S.

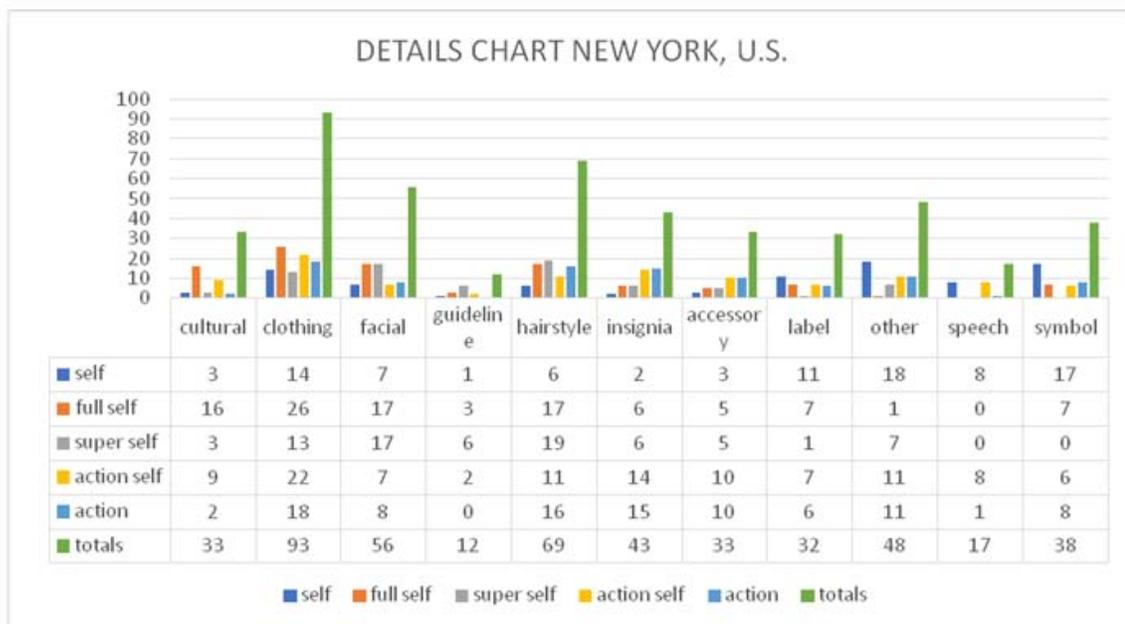


Figure 4.44. *Details Chart Molaos, Greece*

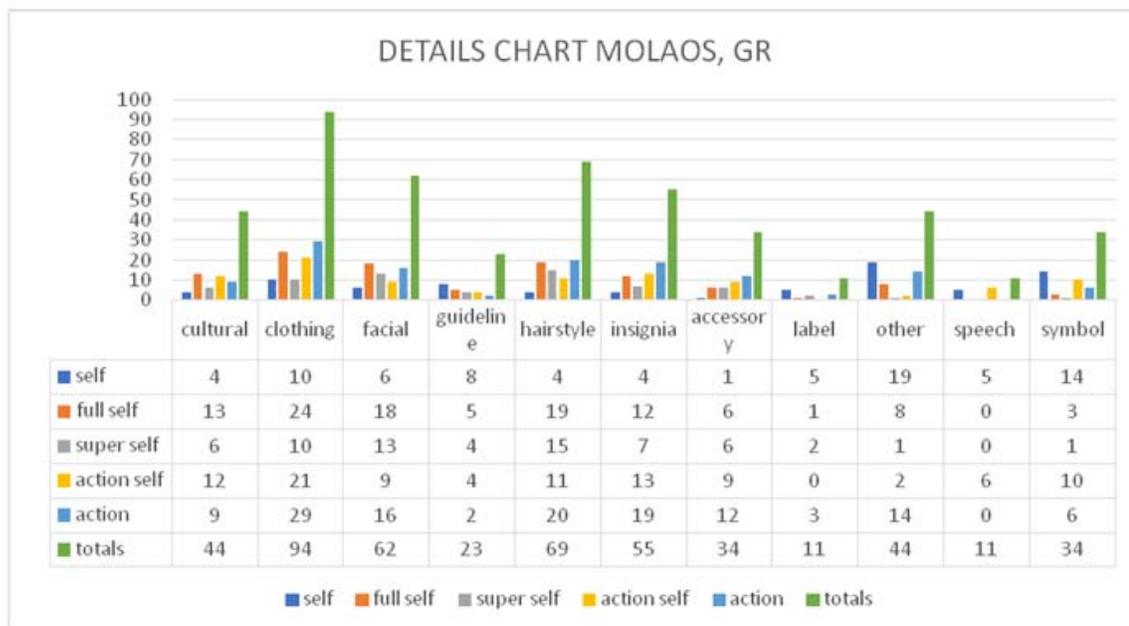
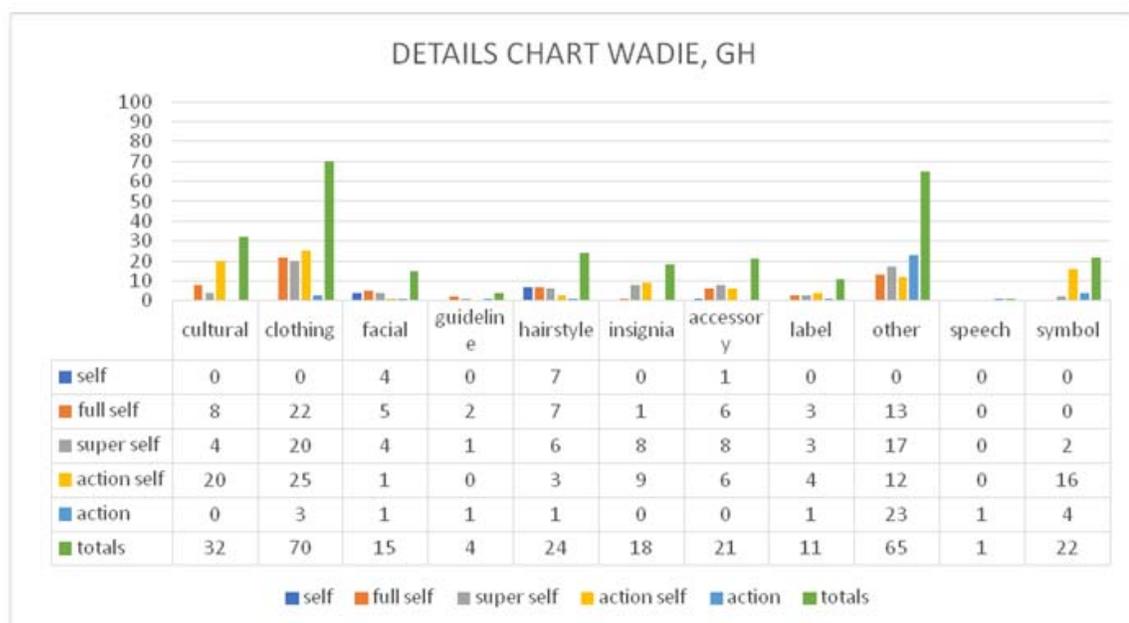


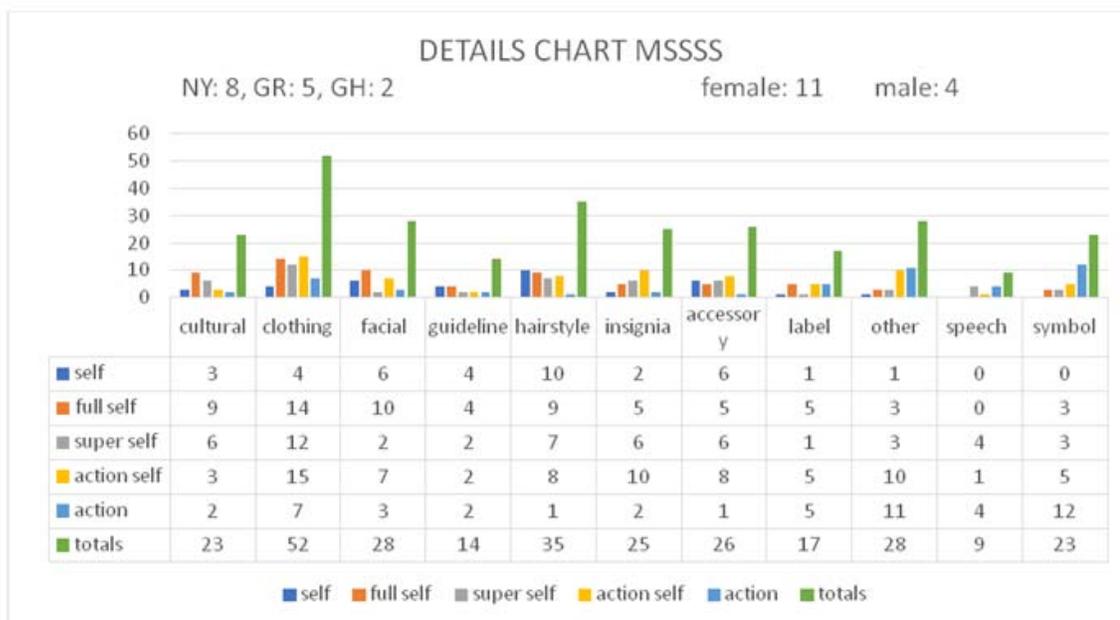
Figure 4.45. *Details Chart Wadie, Ghana*



In a comparison of the details charts by country with the general detail results, the NY and GR results mirror the general results (see Figures 4.42-4.44). However, the GH chart for details reflects differently from the general the results but in keeping with the earlier findings for details from the protocol charts (see Figure 4.45). The Ghanaian cohort included nearly no details in their self-portraits, then this was overturned to include as many details as their NY and GR counterparts as the tasks turned away from direct observation to recall and imagination. Also noticeable is the *other* detail category for GH indicating that the Ghanaians included details that did not fall into the established categories.

The highest category in general and for all of the style profile sets is for clothing, which is to be expected, since identifying items of clothing or a costume occupies a large part of figurative description and is more salient and visually accessible than the other categories. Following in frequency are the *other* category, which includes details such as ‘fan on back,’ or ‘holding a wand,’ then hairstyle, facial, cultural, symbolic, accessory, label, guideline, and speech.

For the MMMMM group, the second, third, and fourth highest scores are for the *other* category, cultural details, and symbolism, with the majority of these scores coming from the action superhero-self drawings (see Figure 4.46). This may indicate that the MMMMM scores for *other* reference the superhero genre. However, the superhero self-portrait scores for cultural reference are low. Therefore, this high cultural reference score for the figure in action may indicate that the mixed style drawing participants more closely expressed themselves personally in this category of drawing because they were representing themselves in an environment, and mainly one informed, at least in part, by knowledge of their own environment. The MMMMM group scored for hairstyle across the self, full self, and superhero self-portraits and scored as highly as the SSSSS group for including an insignia, most prevalently in the superhero in action drawings.

Figure 4.48. *Details Chart MSSSS*

The score for cultural detail rose in the MSSSS chart from the SSSSS chart, indicating that even with only one drawing scored as mixed in style there is a tendency towards including cultural details by those participants using a mixed style of drawing. By comparison, the SSSSS group scores higher for symbolic details and insignias which are in and of themselves schematically manifested representations. In addition, the dramatic difference between the amount of scores for facial detail between the style profiles SSSSS and MSSSS shown below would indicate that the facial detail scores came mostly from the self-portraits drawn schematically by the SSSSS group compared with the MSSSS with far fewer scores for facial detail, since the only variable between the two groups is that the latter group's self-portrait was scored as using a mixed drawing style. However, upon close inspection, not only is the score for the self-portrait having facial details higher for the SSSSS profile group than the MSSSS group, but the facial detail scores for the full self-portrait, the superhero-self-portrait, and the action superhero-self are also higher than the corresponding scores by the MSSSS group. This

may indicate that once schemas for facial representations are employed, the artist continues to employ them—once these schemas become part of a child’s repertoire, they do not move beyond them to a more naturalistic representation of the facial features, whereas the subjects who drew their self-portrait with a mixed style employed few facial details, not only in the self-portrait but across all of the drawings. This observation led to charting just the detail commentary for facial features by drawing style profile to see if any patterns emerged.

Part IV: Facial Comments Charts

This section considers the results for facial details in light of the judges’ comments recorded when scoring organized by drawing style profile and then by country. Interestingly, the MMMMM group has more heads too big scores than the SSSSS group does (see Figure 4.49). The SSSSS drawing profile group has many more scores for facial details than the MMMMM group, with a preponderance of ‘round head’ scores by the SSSSS and the MSSSS profile groups and emoji-like face, line for mouth, dots or circles for nostrils. The MSSSS actually has more big head/small body scores than the SSSSS. Triangle noses are rather evenly dispersed among the three main style profiles: MMMMM, SSSSS, MSSSS.

By country, round heads: GR (12), NY (12), GH (3), 15 girls, 12 boys (see Figure 4.50). The triangle nose occurs the most in Greek drawings (7), then NY (5) and not at all in the Ghanaian drawings, and by 8 boys and 5 girls. Rectangular nose tallied 5 in GR only by 4 boys and 1 girl. Big head NY (5), GR (2) and none from GH, 4 girls 3 boys. Small Body: NY(3), GR (1) and none from GH, all 4 girls.

Figure 4.49. Facial Feature Results Organized by Major Style Profile

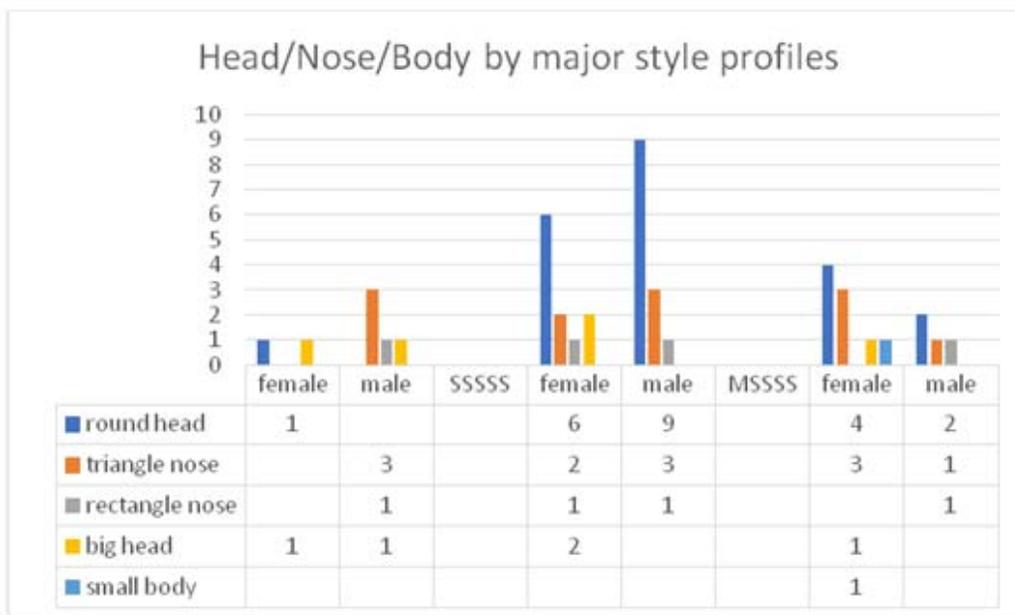
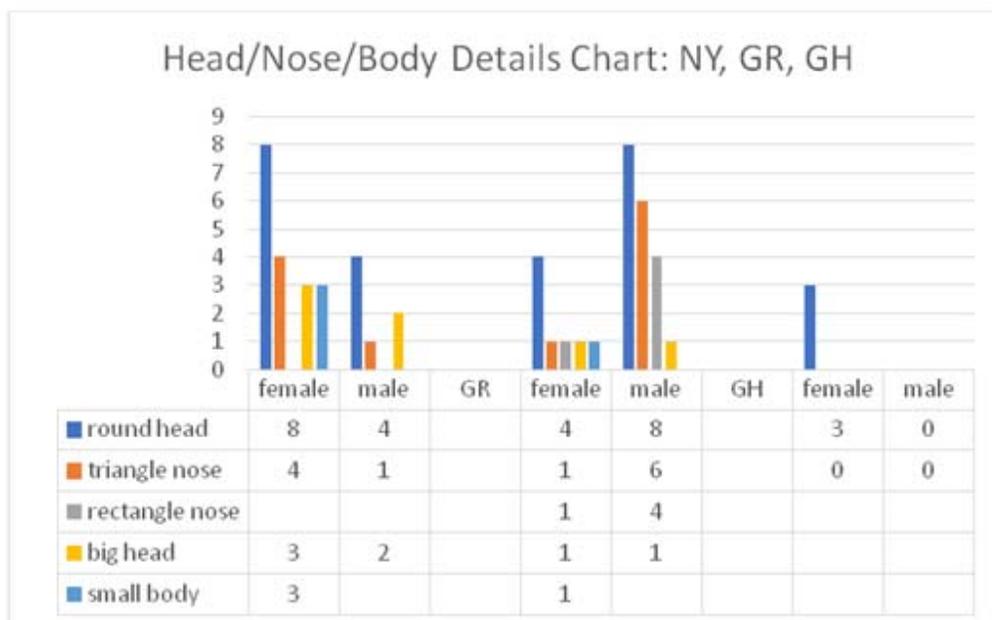


Figure 4.50. Facial Feature Results Organized by Country



Part V: Feature and Figure Charts

The feature and figure charts give visual form to the style group descriptions in the Methodology (Chapter III) by isolating an eye, the nose, and mouth from the self-portraits as well as the superhero figure in action from the fourth drawing task, grouped by main style profiles: SSSSS, MMMMM, MSSSSS, and naturalistic (see Figure 4.51).

The MSSSS style noses and mouths especially have more erasing than the other styles. There is a trend to the style of the MSSSS figures that is different from the SSSSS figures, even when they are both scored S for schematic. The S figure in action from the MSSSSS appear more *active* than those from the SSSSS. Also, the MSSSS superheroes in action show more movement, many of the figures are depicted flying, and more figures are drawn in profile and with the arms crossing the front of the body. The SSSSS group figures are almost completely frontal views, with very little profile used except for some feet and two faces. The superhero in action figures from the MSSSS set also have the most variety in terms of where they are placed compositionally in the frame. By comparison, despite the majority use of profile in by the MMMMM group, many of the figures themselves appear static as depicted in the superhero in action scenario.

Figure 4.51. *Features and Figures by Drawing Style: SSSSS, SMMMM, MMMMM, Naturalistic*

A: SSSSS

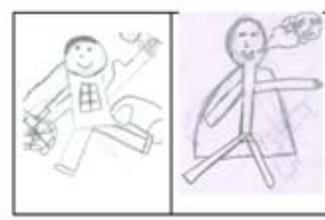
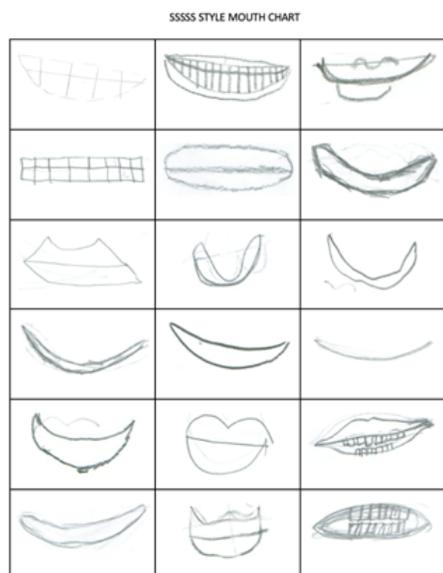
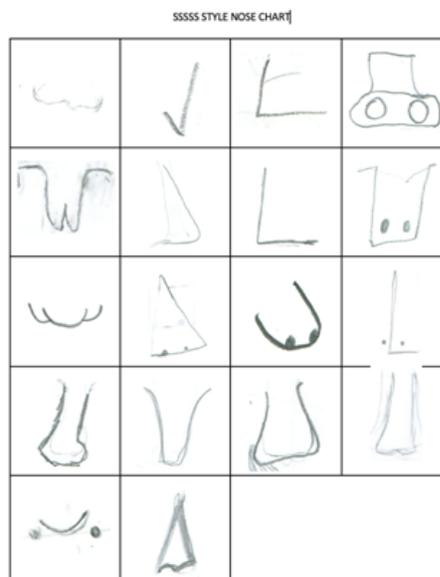
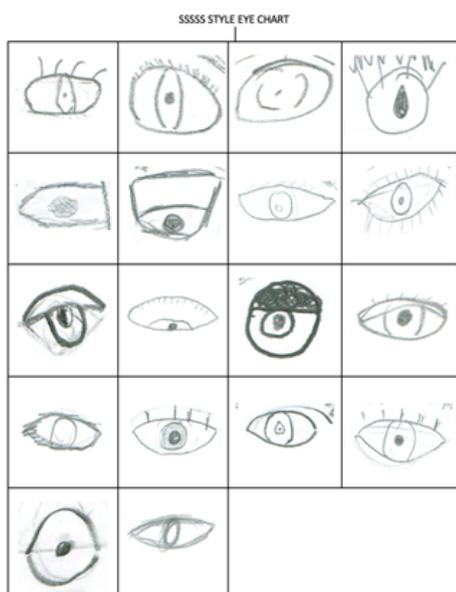


Figure 4.51 (continued)

B: MSSSS

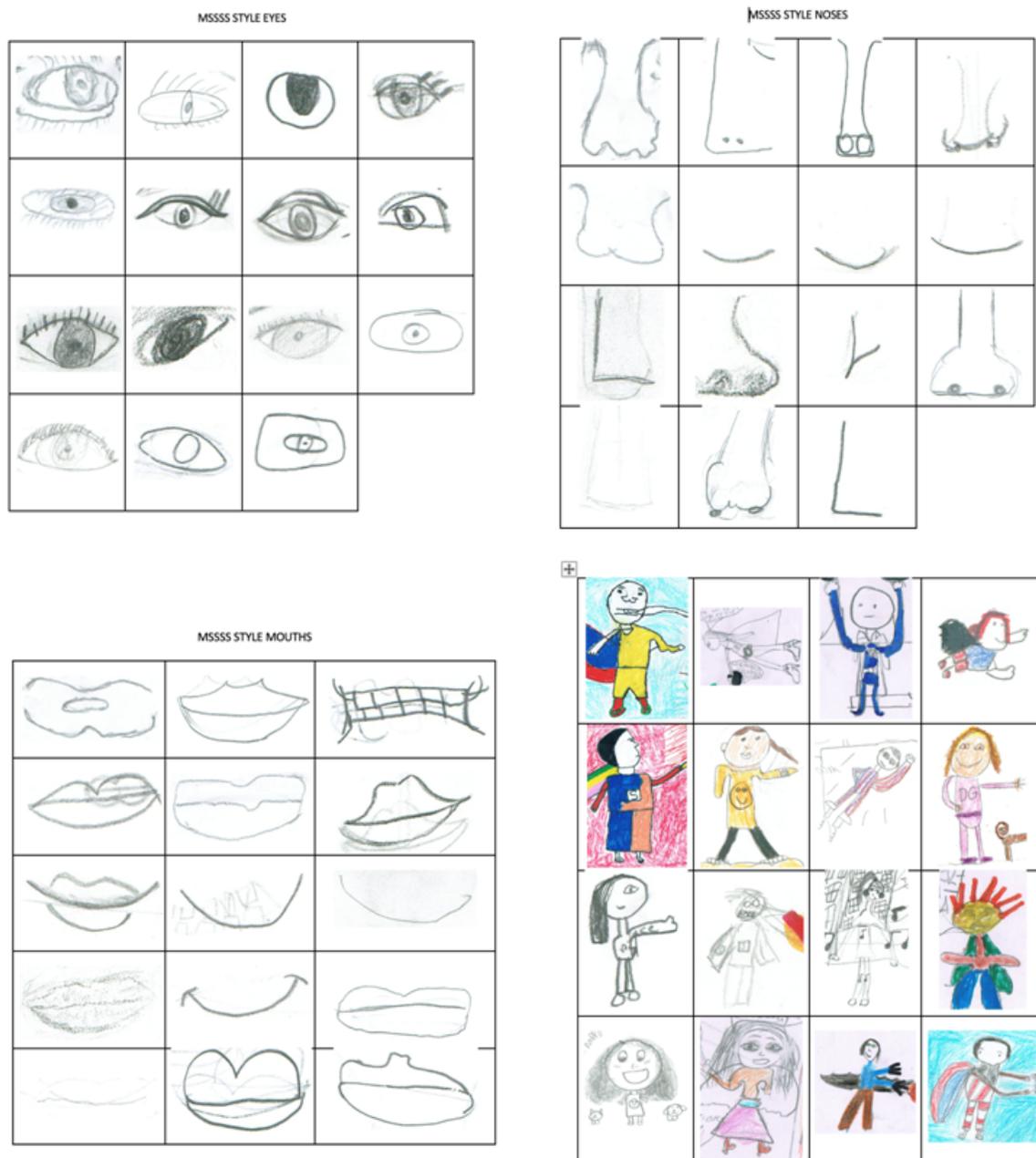
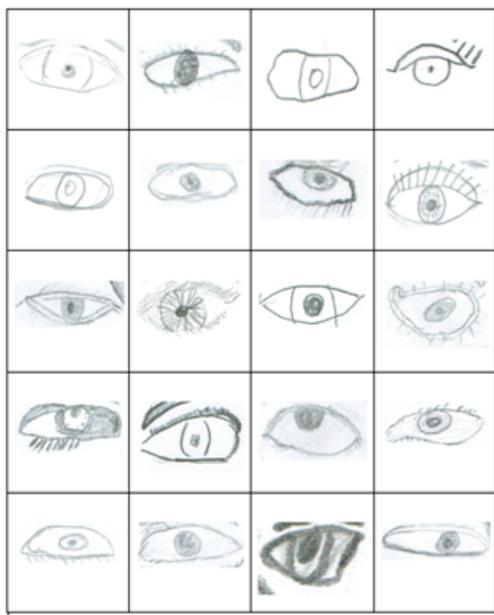


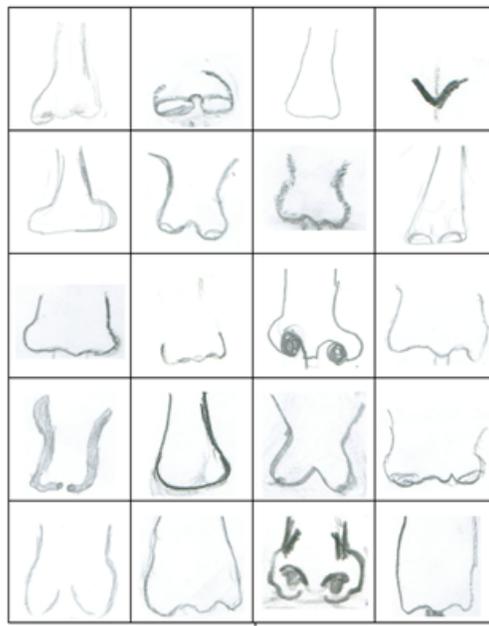
Figure 4.51 (continued)

C: M M M M M

MMMMM STYLE EYE (left) CHART



MMMMM PROFILE NOSES



MMMMM STYLE MOUTHS CHART

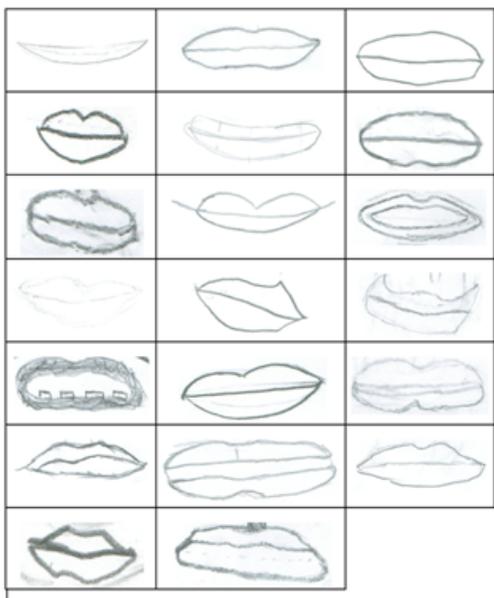
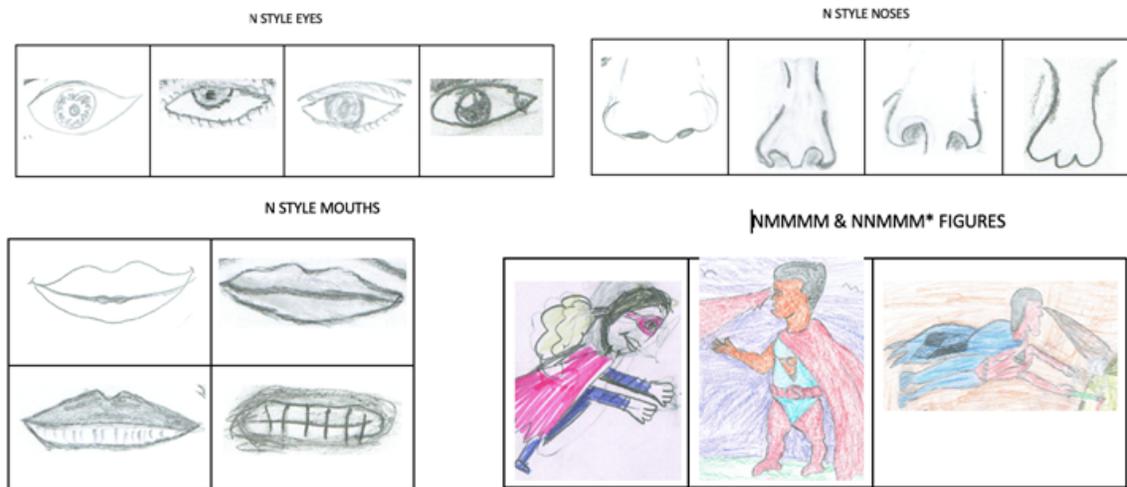


Figure 4.51 (continued)

D: Naturalistic



Note. Figure 4.51 presents examples of features (eyes, nose, mouth) and figures by drawing style profile in four panels: SSSSS, SMMMM, MMMMM, Naturalistic.

Part VI: Matrix Charts

The matrix charts include the details, superhero commentary and written responses from each participant condensed and organized for reference and comparison by style profile, gender, and country cohort. Notable trends that emerged are as follows:

- MMMMM group: from Ghana use a supernatural, nonviolent, method of intervention, from NY or GR use a violent, physical method of rescue.
- SSSSS group: most directly capture the villain, only three are violent: NY male, GR male, GR female.
- The MSSSS's superhero methods of saving people are either psychological/emotional rescues or a nonviolent physical rescue (see Table 4.2).
- Five girls from the Ghanaian cohort who chose superpowers that provide people with food, either by commanding fruit to drop from the sky or rain to fall, declared Religious and Moral Education (RME) their favorite subject in school.

- Six of the New York cohort, all females, used a psychological or emotional form of intervention.
- Eight out of nine MSSSS who do not do art at home are female: NY: 3 (3F), GR: 4 (3F, 1 M), GH: 2 (2F).

Table 4.2. *Chart of Participants Whose Superhero Employed Some Form of Psychological Rescue*

subject	culture	gender	style profile	superpower	rescue
#6	NY	F	SSSSS	to give love to other people	I helped a little girl find love because she didn't have love and was very sad by talking to her about how she can find love.
#17	NY	F	MSSMS	use love to make people be friends	I save the day by making enemies become friends by telling them that's what they want.
#30	NY	F	MSSSS	to make people happy	I make the villains realize what the right thing to do is. I shot a super happy smiley face that hit the robber so he dropped the money.
#43	NY	F	MSSSS	dances to songs to cheer up sad people	I saved the day by putting songs on the boombox and flipping to make girl feel better.
#55	NY	F	MSSSS	music mind control	I saved the person from boredom with music.
#61	NY	F	MSSSS	makes people happy	I made a little boy happy who was the victim of bullying by showing him pictures of animals.

The first two MMMMS both draw at home, not surprising since their style is consistent across the set of tasks, except for scene in the action drawing. MSSMS, NMSMS, and SSSMS do no art at home, MSMMS did not fill out the questionnaire. Like the MSSSS group, the trend among other profiles that changed style across the last task points toward a relationship between making art at home outside of school and maintaining a consistent style. Looking then at the assurance scores for all MSSSS and the 6 above who changed style from 4th to 5th categories found no discernible pattern among their scores.

Part VII: Media Usage

This section reports the number of users and amount of time on devices by style profile, overall results, gender and by country reported in the (c) section of the questionnaire. Time usage was assigned a number: 1-occasional, 2-weekly, 3-daily, 4-more than 1 hr/day. A chart was made of time spent on television, Internet, cell phone, social media, and video games for everyone and averaged by number of participants who were users.

By Style Profile

Among the main three style profile sets, the trend for set MMMMM was watches TV the most on average weekly, next highest was playing video games, but this was only occasionally, with lower scores in the other categories (see Figure 4.52). Of those that do use cell phones, time usage averages weekly for access to Internet and video games. Not surprisingly, 13 out of 22 in set MMMMM are from GH, and most high scores for TV watching are from GH, with an average usage score of 2. Profile set SSSSS reported higher use overall, with an average of 2 for all categories, meaning consistent weekly use (7NY, 10GR, 1GH) (see Figure 4.53). Set MSSSS had a high use of TV and Internet, with highest time usage of any group average 3—for daily usage—and then fairly high use of cell phone and video games—and those that did average weekly—little use of social media by this profile group—in fact smallest category is social media across style profiles and in general (see Figure 4.54).

- MMMSS—TV and video games usage 2 for TV and 3 for video games—only group with more video game usage than TV
- NMMMM—TV most usage—3, Internet, cell phone, video games-1, social media-0, GR and GH
- MMSSS—most like MSSSS with 3 for all categories except social media—NY
- MSSMS—Internet and cell phone daily usage, TV only reported—1

- NNMMM—TV daily-3 nothing else—GH
- MSMMS— no questionnaire
- MSMSS—TV more than 1 hour daily but nothing else—GR-F
- NMSMS—TV-reported, daily usage of Internet, cell phone, & video games, no social media—Male NY
- SSSMS—weekly TV, only reported cell phone and video games—low usage—this profile although close to SSSSS is unlike SSSSS which reported high usage overall
- MMSMM—profile like MMMMM mostly watches TV—scored daily usage because they are all from GH. Generally, there is not much reported social media use with 5 Facebook, 2 snapchat, 4 Instagram, Twitter, YouTube, and musical.ly.

Figure 4.52. *Media Usage: MMMMM Profile*

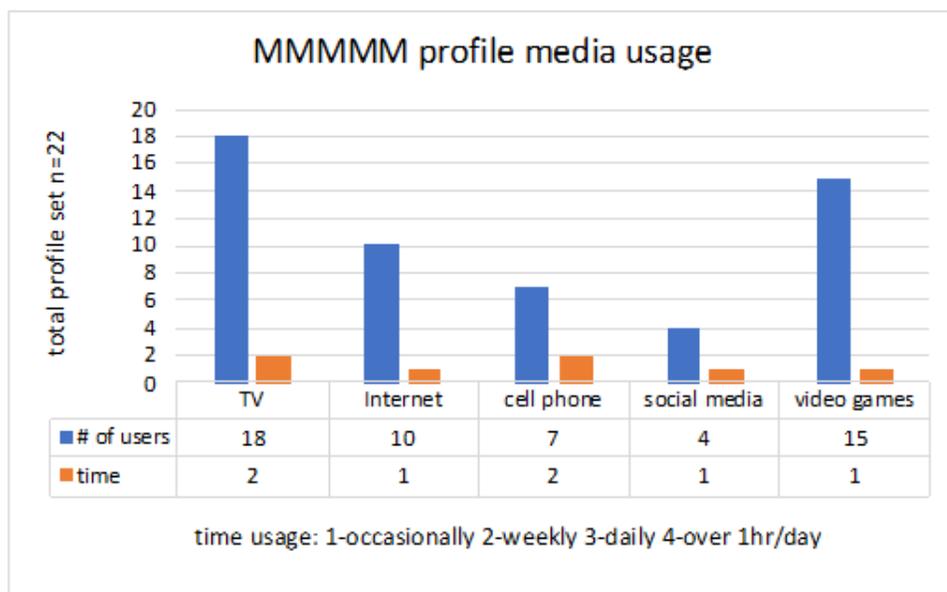
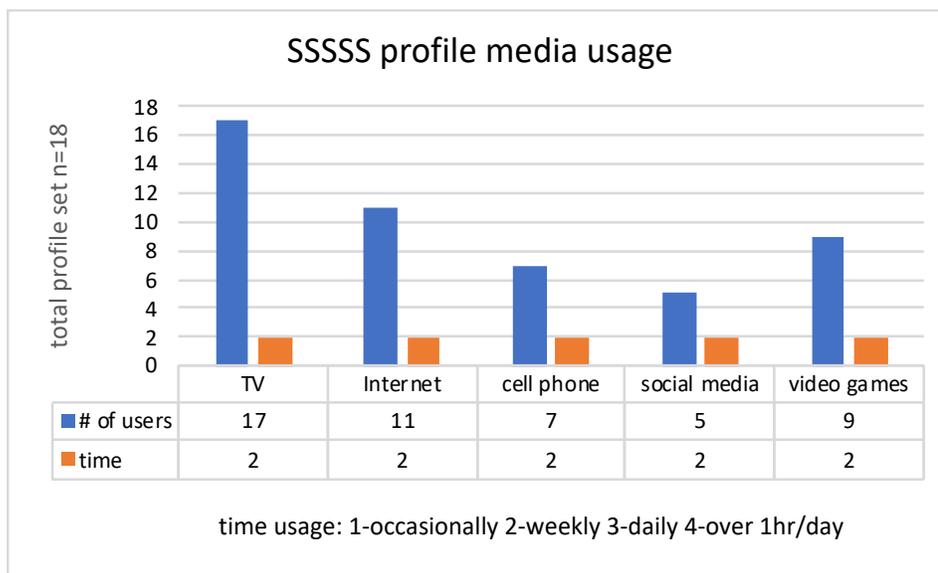
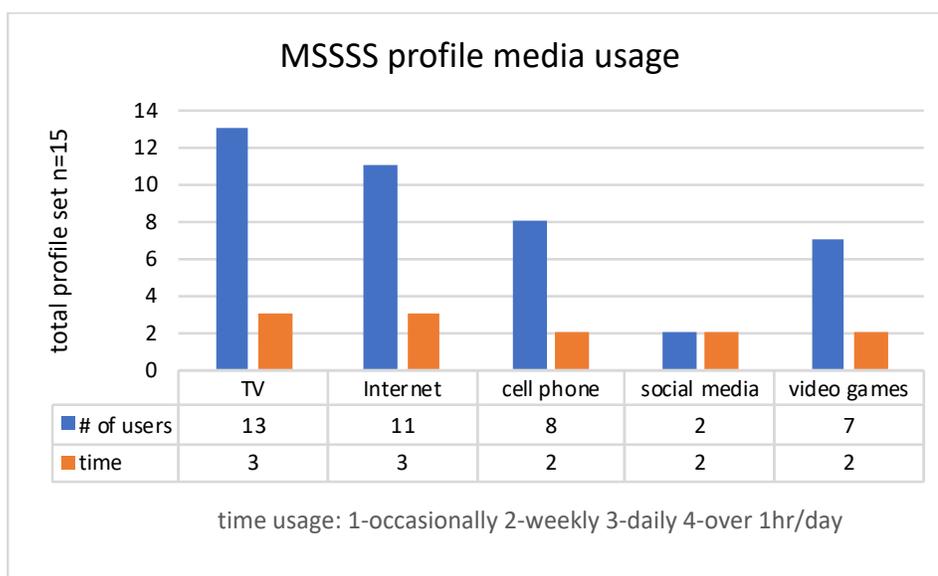


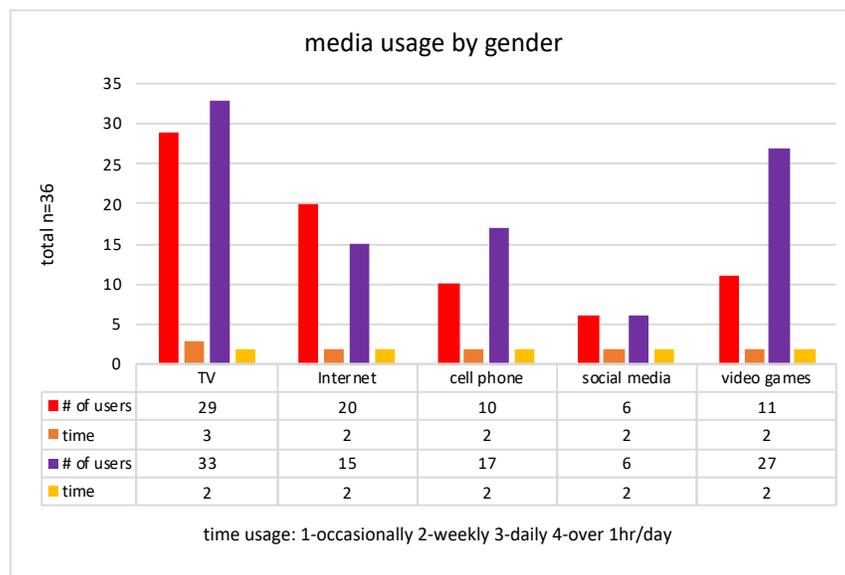
Figure 4.53. *Media Usage: SSSSS Profile*Figure 4.54. *Media Usage: MSSSS Profile*

By Gender

In general, females use the Internet the most, then TV, video games, cell phones, social media. In general, males use TV the most (more than females 33/36), then video

games 27/36 (twice as many as females), then cell phones, Internet and social media. Social media is used the least by all participants (see Figure 4.55).

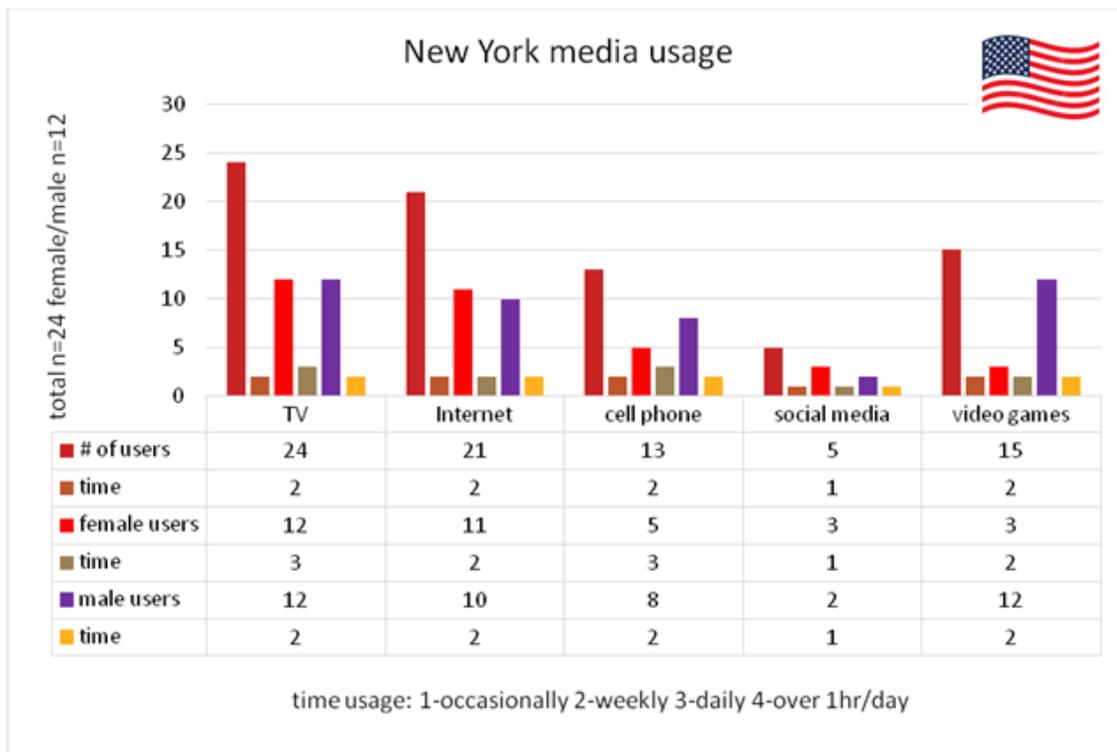
Figure 4.55. *Media Usage by Gender*



By Country

New York

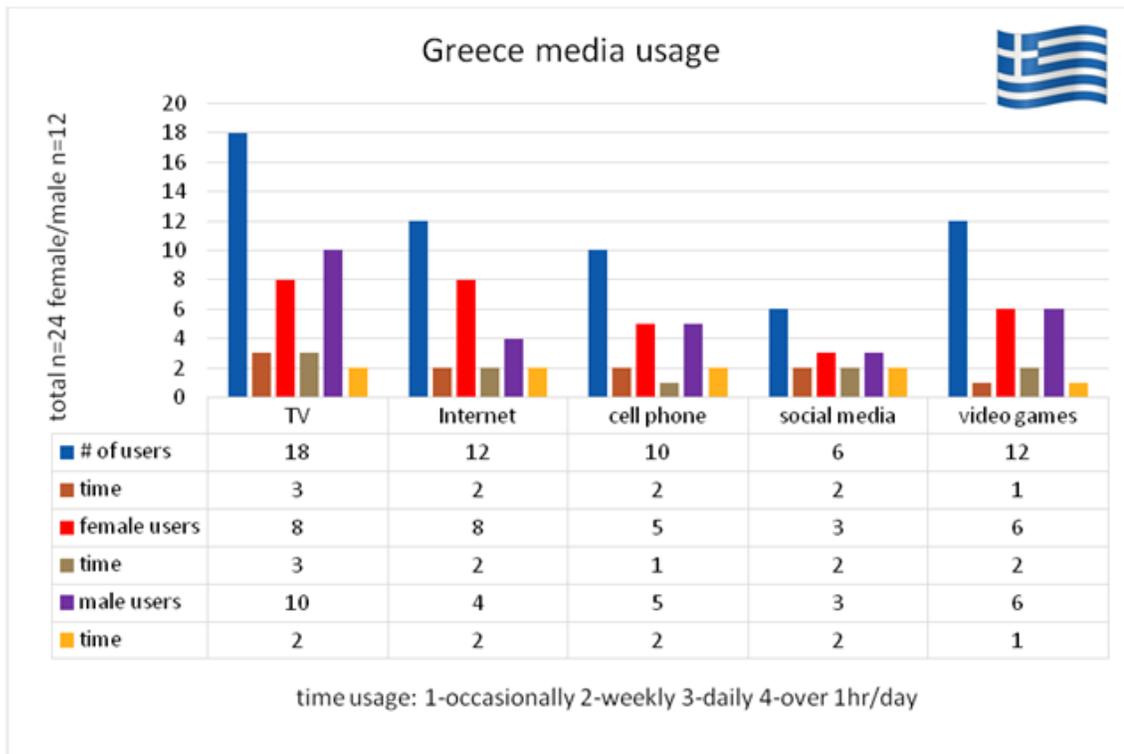
In New York, TV is used by all, then the Internet, video games, cell phone, and lastly social media (see Figure 4.56). The number of hours is weekly and social media only occasionally. The number in each by gender that use TV, Internet, and social media is about the same. However, more males use cell phones and video games, and all males report playing video games weekly, compared with only 3 females. The females who do use cell phones use them every day, whereas the males do so weekly.

Figure 4.56. *New York Media Usage*

Greece

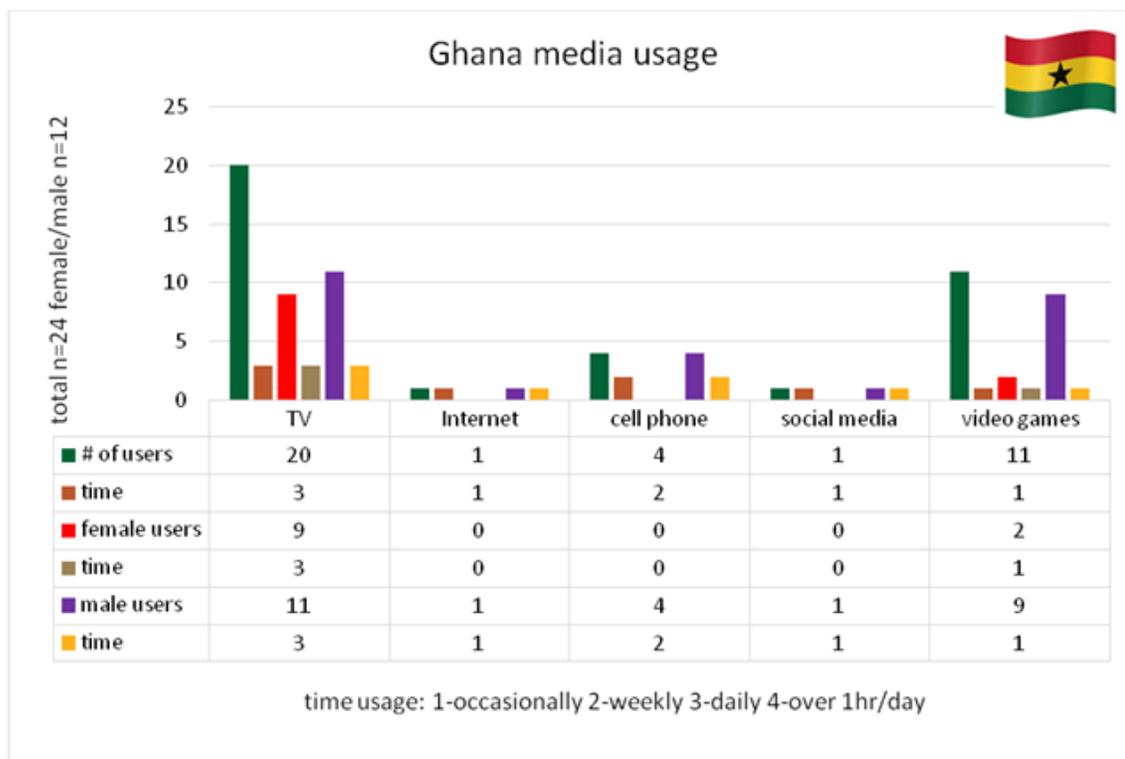
In Greece, TV is used the most, then Internet use and video games are tied, then cell phones, and last is social media (see Figure 4.57). More males watch TV weekly, but the females watch more often on a daily basis. Twice as many females than males use the Internet. Males who use cell phones spend more time on the device. The number of users of video games and social media is the same, except females spend more time playing video games than males.

Figure 4.57. Greece Media Usage



Ghana

The Ghanaians watch TV the most and then play video games, use the cell phone and hardly the Internet or social media (see Figure 4.58). More boys watch TV than girls, but they all report watching daily. Other than 2 girls that play video games, the females do not use the Internet, cell phones, or social media. The 9 boys play video games mostly at the arcade but not often; rather, they use the cell phone for access to games and Internet on a weekly basis.

Figure 4.58. *Ghana Media Usage*

Summary of Results

Style

The analysis of the drawings revealed primary findings having to do with style and details, supported with secondary results in content and media usage. Although most of the drawings are done within their developmental range,² a change in style from more naturalistic to schematic occurs most notably in two instances, first from the self-portrait to the full body self-portrait task, when working from observation changes to relying upon memory and recall to draw the self.

²There may be participants with learning disabilities in the study, as would most likely be in any randomly selected general classroom setting, and which is neither within the jurisdiction of this study to determine nor discuss.

The second notable adjustment in style occurs from the superhero self in action to the entire action scene, when while working from imagination the challenge changes from representing the figure in motion to invention of a setting with multiple figures. There is an overall consistency in style maintained across the middle three tasks, full self-portrait, super hero self-portrait, and superhero self in action. Plus from the superhero self-portrait to the superhero self in action, the number of drawings made with assurance increased overall, perhaps an indication of the participants developing confidence through practice (see Figure 4.59).

Figure 4.59. *Results for Drawing Styles over All Five Categories*

A

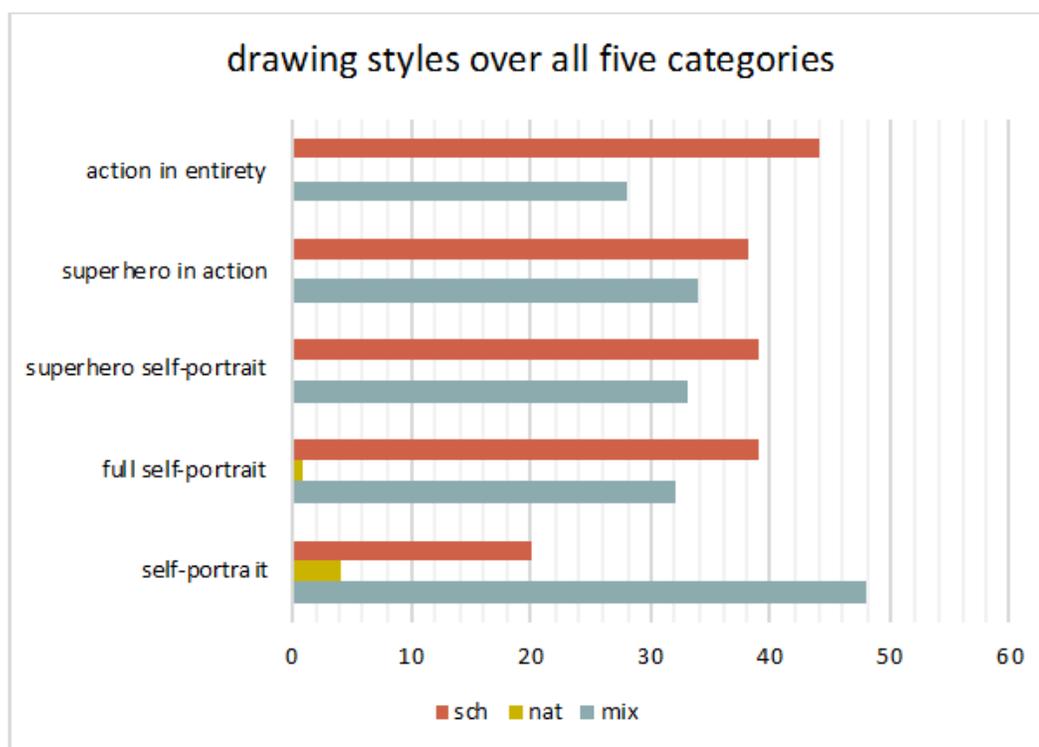
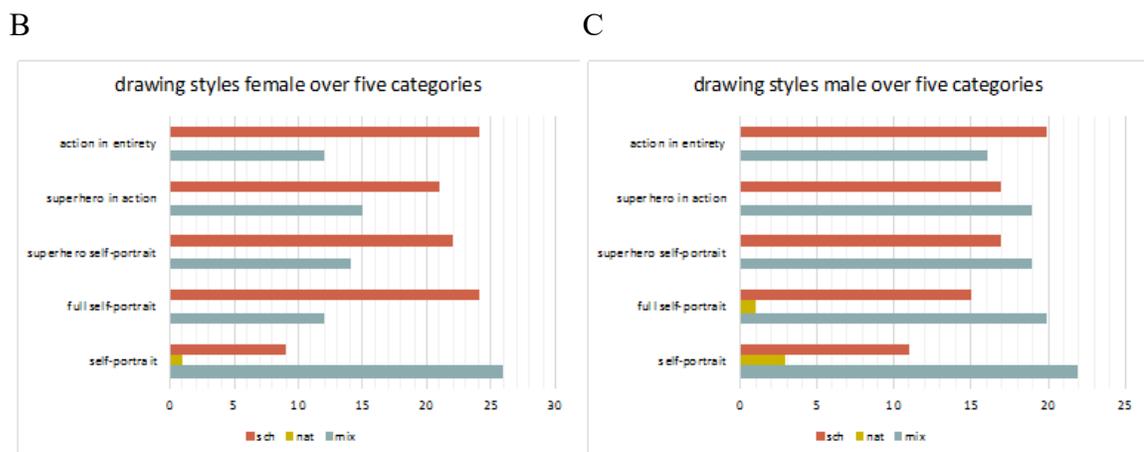


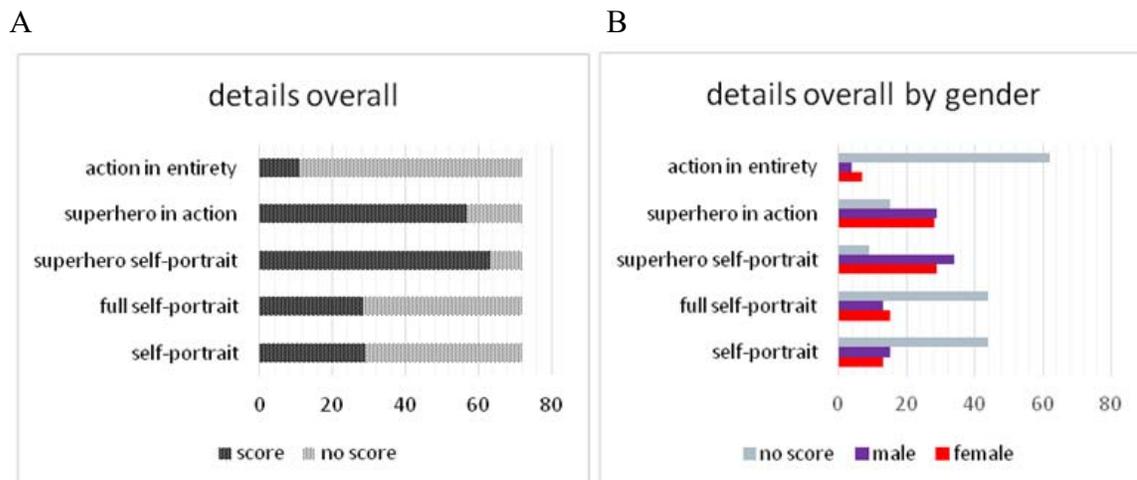
Figure 4.59 (continued)



Note. Results for Drawing Styles over All Five Categories are presented in three panels. Panel A: general results for style. Panel B: drawing style female. Panel C: drawing style male.

Detail

A dramatic increase in the amount of details scored occurred between the full self-portrait and the superhero self-portrait tasks, whereas there was a noticeable decrease in details included and level of assurance in the making of the drawings from the figure in action to the action in entirety drawing (see Figure 4.60). Most of the participants illustrated the use of super or magical powers, but only about half showed coming to people's aid. The MSSSS style group responsible for the first regression in style reported the most media use with daily TV and Internet activity, and then weekly video games and cell phone use. Social media usage, contrary to expectations, was low.

Figure 4.60. *Results for Details Overall*

Note. Panel A: Overall results for details. Panel B: Overall results for details by gender.

Across Cultures

The analysis of the drawings also revealed that the results are reflected differently by the cohort from each country. In the first case of style change, the New York and Greek cohorts switched from mixed to schematic in large number, whereas Ghana's participants maintained their use of a mixed style. In the second case, from the superhero self in action to action in entirety, a switch in style from mixed to schematic occurred across countries and gender.

Details in the Ghanaian drawings were virtually absent until their superhero self-portraits included as much detail as their American and Greek counterparts and continued to do so with the superhero self in action. In the action in entirety category, far less attention was paid to detail across cohorts than in prior drawings. However, the types of details included in the drawings differ across cohorts and by style profile. For instance, the MMMMM high cultural reference score for the figure in action drawing may indicate that the mixed style participants expressed themselves more personally in this category where they referenced their environment when they represented themselves in contrast with the frequent use of symbolism by the SSSSS group in the same drawing task,

pointing toward the greater use of stereotypical conventions. Plus, although the self-portrait score separates the SSSSS and MSSSS groups, the SSSSS scores heavily for facial details across self, full, and superhero self-portraits, whereas the MSSSS scores are low. Interestingly, the American and Greek females are more assured in their drawing than their own respective peers; however, the Americans are confident using schemas and the Greeks using a mixed style, possibly an indication of schematic drawing differing by location, a phenomenon to be explored in the following chapter.

Other Criteria

The Ghanaians were evenly divided between male and female for assurance except that the males all showed confidence with the mixed style whereas the females were divided between schematic and mixed. Drawing in proportion and use of profile were almost exclusively part of the Ghanaians' skill set. In terms of content, slightly more than half of the New York and Greek groups showed coming to people's aid, and of those that did, most were female using psychological means. By contrast, all of the Ghanaians drew powers with agency for rescuing people mostly that harnessed forces of nature. Speech bubbles and text with conventions and labels were used for symbolism mainly by New York and Greek females drawing with a schematic style and for the most part are absent from the Ghanaian artwork.

Media

The MMMMM reports using media the least, with the most scores for TV viewing on a weekly basis and video games and Internet only occasionally. The SSSSS group views TV the most, then Internet and video games, all on a weekly basis. The MSSSS reported the most media use, with daily TV and Internet use and then weekly video games and cell phone. Social media usage across styles was low. In general, NY media usage is the highest, then Greece, and Ghana with the least overall usage, mostly TV viewing and video gaming. However, devices are used for different purposes from

country to country, such as boys in Ghana using the cell phone to play games and connect with the Internet, whereas boys in New York use the cell phone to call their friends.

Chapter V will bring forward the results from Chapter IV to interpret the sets of drawings, as *networks of enterprise*,³ dependent on the drawing challenge, and subject to environmental and cultural influences with respect to the individual child's personal experience. Chapter V will use the children's written commentary about their invented superhero and autobiographical information to help understand the drawings and their motivation or intention in greater depth.

³The network of enterprise "maps the course of and interrelations among the subject's various work enterprises" (goal-directed tasks that endure over time), though the network of enterprise has not taken shape yet in childhood, "intention is a vital element in thought and work of the creative person." (Wallace & Gruber, 1989, p. 39).

Chapter V
DISCUSSION

Introduction: Inside and Outside

From every participant in the study, we have a set of four drawings that represent three different depictions of self from observation, memory, and imagination. In addition to this, we also have written commentary about their invented superhero, and responses to interview questions about art, self-image, and extracurricular activities that add data to the artwork. It is helpful to think of each set of drawings as a “network of enterprise,” to borrow a term from Gruber and Wallace (1992), that describes a group of four related graphic activities organized with a specified end, in this case tasks that culminate in an integrated drawing of a superhero in action within a narrative setting. Each of the four drawing tasks drew upon specific skills: drawing from observation, memory, and imagination.¹ With the observed self-portrait as starting point (the lens is most narrowly focused on the subject through the mode of observation) and as we proceed from drawing to drawing, the ‘autobiographical’ window of the work becomes layered in complexity, encompassing meaningful information about the subject who created them that is both visual and verbal.

¹In the continuation of the discussion, the four drawings will be referred to as: self-portrait= observation drawing, full self-portrait= memory drawing, superhero self-portrait=memory/imagination drawing, superhero in action= imagination drawing, action drawing= action/imagination drawing.

Simply stated, the findings strongly suggest that style, details, content, and media use assumed a dominant role within the drawings. The overall analysis of the drawings in Chapter IV suggests that style is the determining factor, with details and content emerging as functions of style. The dominant styles were schematic and mixed. In other words, although some naturalistic drawings were produced, most of the subjects either drew schematically using simplified shapes and symbols or in a mixed manner that combined schematics and naturalism. Details derived from environment and local culture were mostly evident in the mixed drawings, with stereotypical conventions and text appearing in the schematic drawings. Content, therefore, was connected to style and mediated by media use, as evident in appropriated images and themes. Furthermore, these results were reflected differently in the drawings of the cohort from each country. The New York and Greek subjects switched from mixed style to schematic when the tasks changed from observation drawing to using memory and/or imagination. The Greek and New York subjects also included details in all of their drawings. In comparison, the mixed style was used consistently by the Ghanaian subjects; however, details were virtually absent in their observation and memory drawings, then appeared with abundance in the imagination drawings. Also in the imagination drawings, many of the New York subjects invented psychological or emotional methods of rescuing people or, like most of the Greek subjects, directly captured the villain. The Ghanaians, by contrast, who used media the least, mostly imagined powers with agency for rescuing people that harnessed forces of nature.

The data in Chapter IV were scored by three judges for observable features in the drawings, such as details and/or content where the action was explicit. These data constituted a view from the *outside*, restricted to criteria visibly present in the drawings. However, to understand better the artwork made by these children requires consideration of the same data more deeply—as individual, autobiographical constructions, from the *inside* as well, using the children’s personal descriptions and commentaries. With the

understanding that drawing is a multi-layered and nuanced socially and culturally embedded practice with visual languages and symbolic activity carrying different meanings from culture to culture, this chapter will bring together and interweave the drawings as they were classified in the “outside” scoring and the verbal accounts that offer a more personal and autobiographical view, or “inside,” of the drawings in order to learn more about the specific nature of influences conceivably exerted upon these children’s artistic expression and their sense of agency in the world.

Organization of Discussion

The following discussion is organized into two sections. The first section is organized by drawing style profile² in five parts. Within individual sets of drawings, there often was a mixture of styles used that led to style profiles that were inconsistent. The conversation begins with the profiles containing drawings scored naturalistic, of which there were only 4, then continues with the profile of all schematic drawings to which 17 subjects belong, and then the all mixed profile with 20 subjects. The next part discusses the profile having 15 subjects who scored mixed for the observational drawing and the rest schematic, followed by a group composed of 11 subjects with the most varied style profiles. For each of these five style profile subsections, a subject was selected from each cohort—Ghana, Greece, and the United States—thereby providing three examples for each style profile or group, 15 in total. At the opening of each style profile section, the drawings from observation are reviewed together first, to establish the distinguishing characteristics of the style for that group. Then a vignette is created for each exemplar culled from their set of four drawings, superhero description, and written commentary to

²Style profile refers to the classification of a participant’s set of drawings, designated by five letters, assigned according to the judges’ scores for style across the five scoring categories. All 72 participants were given a style profile.

gain insights about the individual and the relationship between the self-reported descriptions of identity, interests, extracurricular activities, and invented superhero persona, with the results for detail, content, and media. I have included images that serve as some references to visual culture influences on the drawings from traditional, environmental, and media sources.

The second section of this chapter is devoted to an analysis of the difference among findings based on how the results are cast differently within the three cultures and considers ways by which the drawings reflect trends in the culture at large with material from the literature to support the observations, connections, and hypotheses advanced in the analysis. In addition to the autobiographical information provided by the subjects, accounts from the teachers and parents in the form of written questionnaires and personal communications contribute information about curriculum, pedagogy, extracurricular activities, and homelife to the discussion.

Section I: Portraits of Influence

Drawings Exemplifying Naturalistic Style

Figure 5.1. *Naturalistic Observation Drawings*



Note. Naturalistic drawings from observation by subjects 34 male from Ghana, 9 female from Greece, 49 male from New York.

There were only four subjects out of 72 in the study who made a naturalistic observation drawing. Although the style profiles differ, these four are grouped together as the only subjects with scores for naturalistic drawing. All four subjects who scored naturalistic reported that art is an important subject for study in school and that they also make art at home, specifically by copying illustrations from books and photographs. Three out of four participants in the naturalistic group listed Art as a favorite subject, two reported liking Science, and the subject with the most variable profile named Gym as his favorite class in school. The discussion of this group will concentrate on 34³⁴, 9, and 49, (see Figure 5.1) ,representing each of the three cultures respectively: Ghana, Greece, and the United States.

A self-portrait from observation implies looking in the mirror to gather visual information with which to draw a picture of self. For this study, to create an observation drawing scored naturalistic, it is understood that the participant continually referred to their reflection in the mirror as they made their drawing. The naturalistic observation drawings have qualities that set them apart from the mixed and schematic drawings.⁵ Generally speaking, the importance of capturing the essence of the person or the salient

³In this text, numbers were used in reference to participants rather than assigning pseudonyms because it seemed inappropriate to rename 72 children.

⁴For clarity, the number used to identify a subject will be italicized to distinguish it from numbers in the text referring to quantity.

⁵To remind the reader, naturalistic means the contour of the face is nuanced to show the shape of the cheeks and chin. The facial features are in relatively correct proportion and proper placement within the face as drawn. There is limited use of shading to indicate light and dark and very little to describe volume. The frontal view of the face includes clearly ovoid shaped eyes with shading being used for the pupils and irises to show reflected light. The eyebrows are descriptively drawn and filled in with pencil strokes marking out individual hairs. The nose is depicted with a bridge and the nostrils are shaded. The mouth is drawn articulating two lips using some shading to show volume and one portrait articulates the teeth as well. In each case the neck is drawn as a volumetric form that widens towards the bottom, upholding the head, and in two instances showing the collar of a t-shirt. Carefully styled hair is positioned on top of the head. The ears are thoughtfully drawn illustrating anatomical details.

features, such as hairstyle or facial expression, is evoked in all of the self-portrait drawings. When asked about the details in their observation drawings at this age (grades 5-6), Dr. Judith Burton (2013) explains, “youngsters will point to their salience in capturing the individual character of an object or person—’so you know who it is’” (p. 45). The importance of such defining characteristics is clear because they are included and carried through each subject’s set of self-images, lending a consistent resemblance from first to last drawing, regardless of style. Various examples of individualized attributes will be discussed in this section to show the consistencies and inconsistencies in use of graphic details. The first portrait in the naturalistic group, 34, is a male from Ghana, the only participant scored naturalistic for both the observation drawing and the memory drawing, he scored mixed for the remaining tasks that relied upon working from imagination.

Subject 34

Figure 5.2. *Set of Drawings by Subject 34*



Note. Subject 34’s observation, memory, memory/imagination, and action/imagination drawings

In his written statements, 34 explained that:

My father is a mason and my mother is a trader. Our family belongs to the Assembly of God church. My favorite subject in school is Creative Arts. I think art is an important subject for study in school. If I could I would like to learn to sing and become a musician. At home I draw cars. There are no

artists in my family but I have seen someone in town who does Kente⁶ weaving. My favorite food is rice and stew. I am proud of being a respectful boy. When I grow up I would like to be a footballer. After school I play football with my friends and dance to Sarkodie.⁷ I spend about an hour every day doing homework. My chores are to sweep the floor and fetch water. I like fetching water. We go to church sometimes. My favorite holiday is Christmas. I watch my favorite TV program, a telenovela, *What Life Took From Me*, every day. My favorite commercial is *I Will Never Die*. I do not have a computer, Internet access, or a cell phone. I do not play video games.

34 Superhero Commentary.

I am Super Agyapong. My costume is red and blue. My superpower is to let [control] air from the sky [to save people].

Looking carefully at 34's observation drawing (see Figure 5.2), there are several remarkable qualities, starting with the elongated shape of his head and face. His eyes are looking up, which meant dropping his chin down as he tilted his head forward, while gazing in the mirror, and may explain the narrowness of the chin. The contour of his hairline is symmetrical and finely drawn, which tells us that faithfully recording his hairstyle was important to him. In fact, the hair on the sides of his head seems to be enclosing, even framing his eyes, more so than it would appear to in person. This may have happened because 34 turned his head to see the hairline more closely as he drew, resulting in too much of either side of his head shown in the picture. Other elements in his drawing from observation are symmetrical as well and are rendered as if he was looking for patterns as he observed and translated his facial details into decorative interpretations. For example, the eyelashes and eyebrows are encircled with short, uniformly spaced lines. His ears are drawn alike and turned forward to show the complexity of the inner configuration. He drew himself with a moustache and what may be a small goatee pointing just off of the bottom of his chin, although he did not include

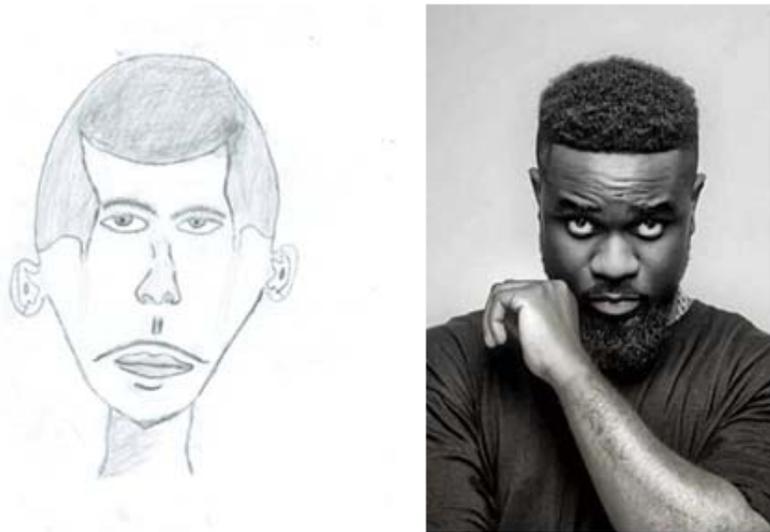
⁶Kente is a colorful Ghanaian traditional fabric that is worn mostly on important occasions and celebrations (Touring Ghana, n.d.).

⁷Sarkodie is a Ghanaian rapper, leading hip hop and hiplife artist ("Sarkodie", 2020).

facial hair on the other iterations of himself. This may be due to the facial hair being barely perceptible unless looking closely in the mirror.

It is also possible that he may be trying on the fade hairstyle of his favorite rapper, Sarkodie (see Figure 5.3), who wears a moustache and goatee. Indeed, 34 tells us that Creative Arts, which includes music study, is his favorite subject in school. Sarkodie is credited with spreading the popularity of the Azonto dance craze that is a favorite across the nation and with Ghanaian diaspora worldwide. Azonto, interestingly, is based on a traditional dance from the Greater Accra Region, called the Kpanlogo. Azonto is derived from Apaa, which means work. Apaa was used to show the profession of a person that later grew into a means of conveying coded messages (“Azonto,” 2020). Doing the Azonto involves miming a job or activity, such as ironing clothes or making a phone call, while swaying to the beat, making this dance understandably popular with the working class.

Figure 5.3. *Comparison of 34’s Drawing with Media Image*



Note. 34’s drawing from observation (left) and Ghanaian rapper Sarkodie (right) (Sarkodie, n.d.).

34’s father is a mason, an occupation requiring training, often through apprenticeship; although not directly related to the arts, masonry does involve

craftsmanship. Even though 34 clearly has an affinity for art, he aspires to become a professional soccer player when he grows up. 34 reported that he plays soccer with his friends every day, but he gives the impression that he also enjoys periods of solitude because he independently draws cars at home.

With both parents working, 34 can be described as responsible and self-motivated since he spends an hour each day on his homework and does chores unsupervised. He also comes across as observant and meticulous. For instance, looking at his rendering of clothes in his memory drawing shows minute details such as the shirt pocket, buttons, seams in the clothing. Also in the memory drawing, the hairstyle has special prominence due to the head being drawn disproportionately larger than the rest of the body.

Figure 5.4. *Weaving Kente Cloth*



Note. Man weaving Kente cloth outside his home in the village of Wadie Adwumakase.

The cape of his superhero has a pattern on it perhaps influenced by the intricate designs in the Kente cloth he sees woven by one of the men in the village (see Figure 5.4). The embellishment on the cape is arranged in four quadrants, with two squares diagonally opposed that are shaded and the other two squares containing stars in one and stripes in the other. This may be an interpretation of the flag of the United States

to identify Superman as an American superhero. The partially shaded design may also have grown out of 34 looking for a graphic solution to emphasize the fold of the cape.

34's superhero resembles the fictional superhero character Superman published by DC Comics that has appeared on radio, TV shows, movies, and video games. In the action/imagination drawing, the colors of the costume are not an entirely correct reproduction of those belonging to the Superman character. The cape should be red and the top of the bodysuit blue with only the briefs in red. He has represented the x-ray vision much the way that the comic is drawn, making the superpower visible like a beam of light (see Figure 5.5). Although 34 created a character that visually resembles Superman and his super powers, there is a noteworthy digression from the Superman personality and myth. For instance, DC comic Superman neither has air flowing from his hands, nor carries weapons, and therefore would not stab a villain.

Figure 5.5. *Comparison of 34's Drawing With Media Image*



Note: Action/Imagination drawing by 34 (left) and DC Comics Superman character (right) (The Conversation, 2018).

Making the choice to transform into Superman rather than another superhero or making up his own, tells us about our subject. An adolescent fantasy, Superman has super

strength, speed, and hearing, x-ray vision, the ability to fly and, for the most part, is invincible. For Superman, though, these superpowers come with the enormous responsibility to save people from danger whenever someone cries out for help. Thus, choosing Superman indicates respect for sound moral judgment and an idealistic personality, the sort of themes dramatized in soap operas. It is not surprising then that he enjoys watching the Mexican telenovela, *What Life Took From Me*, about a woman forced to marry a wealthy man she does not love in order to rescue her family from financial ruin (“Lo que la vida me robó,” 2020). 34 shows a remarkable level of responsibility fulfilling his obligations independently, at home and with his school work. He also pursues his interests in his spare time, drawing cars, playing soccer with his friends, and being carefree enough to dream one day of playing soccer professionally.

Subject 9

Figure 5.6. *Set of Drawings by Subject 9*



Note. Subject 34’s observation, memory, memory/imagination, and action/imagination drawings.

In her written statements, 9 explained that:

I was born in Molaos, Laconia. My favorite subjects in school are Physics and Visual Arts. I like art because I am very good at it. I think a work of art is an image that characterizes something. I often make art at home. No one else in my family is artistic. I think I would be likely to see art at the Eiffel Tower, in France. I am smart, beautiful, an animal lover, and good hearted. My most important characteristic is my right hand for painting. I am proud that I am a good artist. If I could change one thing I would be a better student. My favorite things to do are painting and playing

volleyball. Painting is the most important thing to me. I think people see me as a good child. My favorite foods are spaghetti, *pastitsio* (Greek lasagna), and pork chops. When I grow up I would like to become an actress. When I am not in school I listen to music and dance. I attend church with my family. I watch television for an hour every day. My favorite television program is hosted by Justin Bieber.⁸ My favorite commercial is for *Amstel*.⁹ My favorite movie is *The Minions*.¹⁰ The song I like the most is by the Greek group Νίγμα- Πάμε Καλοκαίρι (N-iGmA -Let's Go Summer). I use the Internet for music and my cell phone for fishing and listening to music. I don't have Facebook. I play video games with my friends.

9 Superhero Commentary.

My super power is to fly, do magic and to extinguish fires with the water in my hands. My costume activates my super powers and gives me the ability to fly. My heroine lives in a cave and has a puppy. I extinguished the fire to save the person.

Subject 9 scored naturalistic for her observation drawing and mixed for the rest (see Figure 5.6). One of the first elements in 9's observation drawing that attracts attention is the pose with the placement of her hair cascading over her right shoulder. In keeping with having described herself as beautiful and an aspiring actress, the thoughtful planning to arrange her hair especially for the drawing shows us that 9 is self-possessed enough to stage her appearance. Most likely she has perused her image in the mirror in private, perhaps making self-assessments as most adolescents do, and trying on different hairstyles, like the one worn by the lead singer of her favorite song, *Let's Go Summer* by the Greek music group *Nigma*. The song *Let's Go Summer* (2012) was a tremendous hit that aired ubiquitously on television, radio, at beach bars and discos across Greece each summer for years after its release. In this discussion of influences, it is also interesting to note aspects of American singer Katy Perry's marketing image, evident in the styling of the *Nigma* group's lead singer (see Figure 5.7).

⁸Canadian singer, musician and teen idol ("Justin Bieber," 2020).

⁹Amstel Beer commercial in Greek, 2016, "Our Own Beer" (Amstel Beer, 2016).

¹⁰*The Minions* is a spin-off of the *Despicable Me* movie series and part of the franchise (Coffin & Balda, 2015).

Figure 5.7. Comparison of 9's Drawing with Pop Culture Images



Note. 9's observation drawing (left), lead singer of Greek band Nigma (center) (Ruserbia, 2012), American singer Katy Perry (right) (Style Bistro, 2020).

Another striking element, given that she fixed her hair, is that she drew herself wearing her glasses. Indeed, the resemblance of 9 across drawing tasks is so consistent it appears studied, with her glasses on, not only because of the likeness but markedly due to the repeated use of stylized features. For example, the shape of the mouth with the sides curling up to small curved lines for dimples stands out from the other features as particularly more schematic than naturalistic. The shape of the eyes as well resembles a stereotypical shape often referred to as “cat eye.” In addition, 9 not only drew her self-portrait with her glasses on, but she substitutes a mask for glasses in her superhero transformation. Also, her hair transforms from straight to curly in the depictions of superhero self.

Learning from 9's statement that her favorite movie from the series is *Minions* (Coffin & Balda, 2015) opens her artwork up to a more personally informed interpretation. Returning to the observation drawing, upon close inspection, one notices that subject 9 has “Bob the Minion,” or at least the top of his head, showing on her t-shirt, a character from the *Despicable Me* movie franchise shown in Figure 5.8 (Coffin & Renaud, 2010).

Figure 5.8. 9's Observation Drawing with Bob the Minion



Note. Detail of 9's observation drawing with Bob the minion on her t-shirt (left), Bob the minion (center) (Fandom, n.d.-h), Bob the minion transformed into an evil minion (right) (Fandom, n.d.-h).

One of the main protagonists in *Despicable Me*, Margot Gru is 11-12 years old and the oldest of three adopted girls (Wikipedia, n.d.). Margot's animation has long hair in a ponytail, wears glasses, has a heart-shaped face, and the head is drawn proportionately too big for the body, all characteristics similar to those found in 9's self-portraits (see Figure 5.9). In addition, when 9's full self and superhero self-portrait drawings are compared side by side with Bob the Minion and Margaret Gru, the tilt of the head to the side with a smile appears to be a stylistic device for conveying a combination of confidence, interest, and curiosity.

Figure 5.9. Comparison of 9's Drawings with the Margot Gru Animated Character



Note. 9's memory drawing (left), memory/imagination drawing (center) and the Margot Gru character from the *Despicable Me* and *The Minions* movie franchise (right) (Fandom, n.d.-g; Microsoft Bing, n.d.).

There is a correlation apparent in color choices between 9's superhero transformation with the minion characters. When the minions transform into evil creatures, they turn from yellow to purple and sprout hair (see Figure 5.8). In 9's memory drawing, she is wearing a color scheme very similar to a yellow minion in jean overalls and then changes into her superhero form wearing a purple costume (see Figure 5.9).

Taking a close look, 9's illustration of her superhero-self saving people from a burning building conveys the use of comic book conventions and schemas. For example, the rectangular building with square windows in 9's imagination drawing looks much like the buildings in the background of Figure 5.5 with Superman. The sketchy lines illustrating flames and water shooting from her hands belie a confidence with the drawing materials. The schematically rendered hills are drawn in uniform arcs, with a ribbon like road. 9 used scale to depict depth with the crowd of small stick figures in the background. The clouds were colored blue and the sky left the white of the paper, an error often seen in the landscape of children's drawings. By comparison, the landscape still in Figure 5.10 (Fandom, n.d.-b) from the bedtime story sequence in the *Minions* movie shows stylistic similarities to 9's superhero action drawing in the general layout, with mounded hillocks, and small figures in the background (Coffin & Balda, 2015).

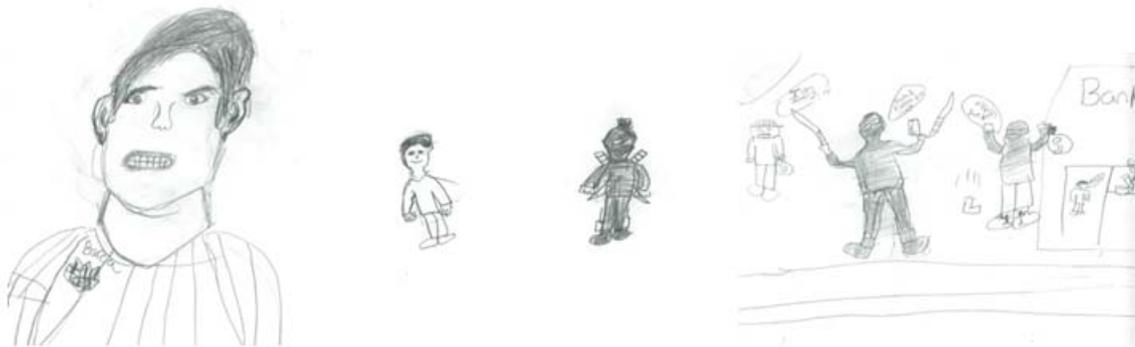
Figure 5.10. *Comparison of 9's Drawing with Movie Landscape Image*



Note. 9's imagination drawing (left), the Minion's bedtime story, still from the *Minions* movie (right) (Fandom, n.d.-b).

Delving further into the influence of movie animation on 9's drawings, there is an interesting divergence between the *Despicable Me* backstory and the superhero genre. There are no superheroes in the *Despicable Me* movie series, only supervillains. *Minions*, according to the story, are small, capsule-shaped yellow creatures that wear goggles and overalls, who have served only the most despicable masters throughout history. Much of their appeal derives from their slapstick antics, since they only speak gibberish (Murphy, 2015). The main character, Margot's adoptive father Felonius Gru, is a reformed supervillain, making him a sort of anti-superhero. Imaginative thematic departures from classic superhero mythology such as the light-hearted *Despicable Me* films may in part have been a catalyst for some of the more original 'superheroes' created by subjects in this study (Coffin & Renaud, 2010).

Proud of her facility for drawing, 9 exudes self-confidence rooted in a keen sense of who she is and the capabilities she possesses. She pursues her interests: painting, listening to music, surfing the web, and dancing in her free time. Though her responses contain a hint of societal pressure to be more studious, 9 did not mention how much time she spends on her homework each day, nor does she use the Internet for information to do homework assignments. One might assume that due to stereotyping, she identified the Eiffel Tower in France as a place where she would see art; however, after time spent looking at her artwork in light of her interests and statements about herself, this comment is probably more playful than sincere. Indeed, her favorite movie, the video for her favorite song, even the Amstel beer commercial she likes, are all comedic performance pieces. 9 exhibits a buoyant sense of humor that informs her creative decisions and how she views the world. Whether she is synthesizing salient features of the Margo Gru character into her own self-portrait renderings, employing the color parallels between the minions and her superhero transformed, or adopting the stylistic devices from the animated movie landscape into her own, 9 demonstrates astute powers of observation and a knack for creative appropriation that propels a burgeoning personal artistic style.

Subject 49Figure 5.11. *Set of Drawings by Subject 49*

Note: Subject 49's observation, memory, memory/imagination, and action/imagination drawings

In contrast with the other three participants in this group of naturalistic drawings, 49, male from New York, has the most inconsistent style profile (naturalistic, mixed, schematic, mixed, schematic), which may be a factor in the amount of erasing in his self-portrait (see Figure 5.11). Of the four naturalistic observation drawings, 49 is the only participant to include teeth. Compared with the other members of this naturalistic group, 49's memory drawing makes the greatest departure from his naturalistic observation drawing by being more simplistic and less detailed. Plus, the subsequent iterations of self are depicted with the entire body masked. Notably, regardless of the facial features being covered, the energetic body posture is distinctively portrayed across the second, third, and fourth drawings.

In his written statements, 49 explained:

My favorite subject is Physical Education. I think art is important to study because there are many important artworks. I would like to go to a museum to study art, the realism period. I think a work of art is 'sick.' I draw soccer players at home. My sister makes art, she can draw anything. I am human, imaginative, tough, inquisitive, hardworking, playful and funny. My strongest characteristic is being funny. I am a good, hard worker. I have a weakness for Animatronics.¹¹ People think of me as a soccer player. I like

¹¹Animatronics in this context refers to bipedal robots that are the main antagonists of the Five Nights At Freddy's franchise (Fandom, n.d.-a).

Barça.¹² My favorite food are *Pastelitos*.¹³ My family and friends are most important to me. If I could change one thing in my life it would be when I lose at soccer. In my spare time I listen to music, use the computer, go on vacation with my family, attend church, and watch television. On television I like to watch ESPN,¹⁴ *Teen Titans*,¹⁵ *Chowder*.¹⁶ My favorite commercial is *Copa America*.¹⁷ My favorite movie is Captain America: Civil War. My favorite song is *One Dance* by Drake. I use the Internet a lot for games, videos, and work. I do not have Facebook. I use the phone a lot for games, videos, and calls. I play video games a lot at my house and sometimes with friends. My favorite video game is called WATCH_DOGS.¹⁸ I play it because it is awesome.

49's Superhero Commentary.

My superpowers are telekinesis, strength, and regeneration and also a sword that helps me fight. If I get hurt my costume has a barrier to help me. It [my costume] also helps me land sickly [accurately strike my target]. I live in a tower in Hollywood like Tony Stark.

Although the style scores for 49 fluctuate from naturalistic, mixed, schematic, mixed, back to schematic, all of the figures he draws exude energy possibly due to drawing soccer players at home in his spare time. Subject 49's interest in soccer most

¹²Futbol Club Barcelona, known simply as Barcelona and colloquially as Barça, is a professional football club based in Barcelona, Catalonia, Spain (“FC Barcelona,” 2020).

¹³*Pastelitos* are baked puff pastry filled with sweet or savory fillings (“Cuban Pastries,” 2020).

¹⁴ESPN is an American basic cable sports channel owned by ESPN Inc (“ESPN,” 2020).

¹⁵*Teen Titans* is an American animated superhero television series created by Glen Murakami, based on the DC Comics characters of the same name (“Teen Titans (TV series),” 2020).

¹⁶*Chowder* is an American animated television series created by C. H. Greenblatt for Cartoon Network. The series follows an aspiring young chef apprentice (“Chowder (TV series),” 2020).

¹⁷The Copa América Centenario (English: Centennial Cup Americas; literally Centennial America Cup) was an international men's association football tournament that was hosted in the United States in 2016 (“Copa América Centenario,” 2020).

¹⁸Watch Dogs (stylized as WATCH_DOGS) is an action-adventure video game (Ubisoft, n.d.).

likely motivates him to practice and improve his drawing skills through copying pictures. The fact that 49's memory/imagination drawing (superhero self-portrait) is essentially drawn wearing a full body mask through which we cannot see facial features may have contributed to the schematic style score. Nevertheless, 49's superhero self-portrait figures also have a manga quality about them resembling a ninja or a cyborg, popular *manga*-derived comic types. Cyborg characters appear in many popular children's television programs, such as *Teen Titans Go!*, *Teenage Mutant Ninja Turtles*, and *Lab Rats*.

The appearance of 49's superhero self seems based upon a combination of sources of influence including a ninja warrior, Iron Man, and Slade from *Teen Titans* (see Figure 5.12). 49's superhero-self's resemblance to Iron Man, particularly the face mask with slots for eye openings, may derive from his emulation of the glamour of Tony Stark,¹⁹ living in a tower in Hollywood, referred to in his superhero description. In the comic book storyline, Stark transforms into Iron Man by wearing and operating a suit of powered armor. Like many of the Marvel superheroes, much of Tony Stark's backstory is science fiction; genius inventor and engineer who over the course of time develops his suit of armor and the weapons that he deploys ("Tony Stark," 2020). The superpowers 49 declares having, which include great strength, the powers of telekinesis, and regeneration, are quite similar to those abilities possessed by Iron Man, who in addition to strength, has enhanced healing powers, uses technopathy to control his Artificial Intelligence (AI) armor, and the *Infinity Gem*²⁰ to move any object (IMDb, n.d.-a).

¹⁹Tony Stark is the DC comic character whose 'alter-ego superhero persona' is known as Iron Man ("Tony Stark," 2020).

²⁰"The *Infinity Gems* are six gems appearing in Marvel Comics. The six gems are the Mind, Power, Reality, Soul, Space, and Time Gems."("Infinity Gems," 2020).

Figure 5.12. *Comparison of 49's Drawing with Manga and Media Images*



Note. 49's memory/imagination drawing (left), ninja costume (center left) (Etsy, 2020), Iron Man (center right) (Fandom, n.d.-c), and Slade character from Teen Titans (right) (Fandom, n.d.-j).

Parallels also can be found between 49's memory/imagination drawing and the character *Slade* from his favorite television show, *Teen Titans*. *Slade*, sometimes known as *Deathstroke the Terminator*, possesses great strength and endurance, has the power to regenerate, is a master combatant, carries two swords on his back, uses magic, and is the archenemy of the *Teen Titans*. In his action/imagination drawing, 49 portrays his superhero brandishing a sword in each hand while levitating two thieves off the ground, a performance that strongly resembles *Slade's* abilities. In addition, it is worth noting that 49 based his superhero largely upon a super villain, not a superhero. It is easy to understand the appeal of the television program *Teen Titans* to subject 49 in light of statements he made about valuing family and friends above all else, since *Teen Titans* are a team of young superheroes who live and train together, as they grapple with adolescence and maintaining their friendships with one another.

Figure 5.13. Comparison of 49's Drawing with a Video Game Image



Note. 49's action/imagination drawing (left), frame with protagonist from Watch Dogs video game (right) (Ubisoft, 2020).

Looking at the placement in 49's action/imagination drawing of his superhero in the foreground of the scene, facing out to the audience with the criminals and bystanders in the background, has interesting visual elements in common with a frame from his favorite video game, *Watch Dogs*. Both 49's superhero in action image and the *Watch Dogs* game environment are dramatic, action-filled cityscapes. The theatrical tone is emphasized with vanishing point perspective in the video game still that appears to be attempted by 49 in his drawing using the angle of the bank building roof on the right, and a shape that cuts the top left-hand corner at an angle, thereby generating a corridor-like space in the center of the image that is grounded by the stage-like street in the foreground upon which the action is set. Not only is the video game layout a possible influence on the compositional elements in drawing task number four, the monochromatic color palette may have also influenced the way 49 used the pencil to 'color' his superhero and the main villain. Or the lack of color may indicate a viable connection with ninja characters and Japanese manga magazines, which are almost always in black and white, with full color prints reserved for special editions (Pagan, 2018).

According to the Ubisoft company website, creator of the *Watch Dogs* video game, gamers play as the protagonist Aiden Pearce, who is out for retribution from the

syndicate responsible for his family's demise. Like the villainous character Slade from Teen Titans, Aiden Pearce is an assassin turned scorned vigilante. With the story based in Chicago, Pearce is a genius computer hacker who manipulates the network that runs the city to locate and destroy his enemies (Ubisoft, 2019). The premise of the game is to repurpose computer networks, used to facilitate daily life from controlling street lights that direct traffic to storing personal information in numerous data bases, in the service of tracking down and executing those responsible for perpetrating violence upon Pearce's loved ones. Note: the thematic thread of wielding computer technology, in effect as a superpower by Pearce, connects to Tony Stark's phenomenal engineering accomplishments and use of AI. And once again, the backstory for 49's favorite video game is connected to the importance of family, with Pearce being driven to exact revenge on behalf of his family.

Drawings Exemplifying Schematic Style

Figure 5.14. *Schematic Observation Drawings*



Note. Schematic observation drawings by subjects 14 female from Ghana, 16 male from Greece, 10 female from New York.

Eighteen out of 72 subjects scored schematic for all drawings, 10 males and 8 females. Most of the schematic observation drawings come from Greece and New York,

with only 1 female from Ghana. A useful definition to this discussion of schematic drawing is a picture that shows something in a simple way, using symbols (Lim, 2019). The schematic observation drawings have qualities that set them apart from the naturalistic and mixed drawings.²¹ Here are typical examples of schematic observation drawings from each country.

The favorite subject of study in school is varied amongst the subjects in the schematic style group, but almost all of the members consider art an important subject and like to paint at home, rather than draw. The preference of the painting medium by this group over drawing may be worth noting, since painting, generally speaking, is a more effective vehicle for emotional expression, whereas the drawing medium tends to lend itself to creating more controlled imagery. As art educator Linda Louis (2005) has commented, “Drawing media do not provide as many opportunities for repleteness as paint, at least in the hands of artistic beginners” (p. 348). The schematic group’s preference for paint underscores the relationship between the choice of art materials with certain expressive qualities and the content of the artwork produced.

²¹Characteristics of schematic style drawings from observation include the shape of the head is round or oblong, not oval. Mostly, the nose is triangular, rectangular or only a line for the bottom contour. Eyes are oval or lens-shaped. Most have no eyelid, pupil is not filled in, eyelashes only on top. The eyebrows are a straight or arched line, some filled in. Ears sticking out of sides of head, many with a curved line or spiral in the middle. The hair is generally done in quick strokes, the females have hair originating from hair part in middle and cascading down either side of head in arches, some are filled in. The males also used stroke marks for hair on top of the head and down to ears and sometimes filled in. There is no neck or it is too narrow, drawn with two straight lines down or veering off on a slight angle, some include rounded shoulders.

Subject 14

Figure 5.15. *Set of Drawings by Subject 14*



Note. Subject 14's set of observation, memory, memory/imagination, and action/imagination drawings.

In her written statements, 14 explained:

I live in Wadie with my mother and younger brother. My father lives at Bansmah. My sister lives in Accra. I visit my sister during June vacation. We belong to the Methodist church. My father is a taxi driver and my mother doesn't work. My favorite subject in school is Religious and Moral Education (RME). I would like to learn how to draw better. At home I draw toys. I am very combative—I hit people for stupidity. I get annoyed when people do things I don't like. When someone fights back I never forget. I am respectful, funny, and outgoing. I ask questions. I am trying to become more forgiving. People see me as a good girl. I like pop music, hip hop, and Wadleigh music. I like to dance to the song *Akayida* by Hip Hop artist Guru. I like to dance to gospel music too. I sing at church and I sing gospel at home. My favorite food is foofoo and granuts soup. When I am not in school I like playing Ampe (a jumping game), soccer and skipping rope. At home I help my parents to cook and wash the dishes. Right now I am reading 'The Frog Princess.' I look forward to summer holidays and Christmas. I would like to become a nurse when I grow up. We have one television I watch every day. I like watching T.V. My favorite program is *The Pulpit*. My favorite commercial is *This Way Madelak* for breakfast cereal. We have no Internet access or cell phone. I do not play video games.

14's Superhero Commentary.

My superhero 'Super Ella' has the power to make the weather rain. My costume is red and blue. I save people by commanding it to rain.

There are many interesting qualities in 14's drawings, such as drawing her eyes as if connected to the sides of her face. In her memory drawing, 14 drew herself wearing the

mandatory school uniform. It is interesting that her superhero costume looks like the play clothes she wears after school except that the colors of the shirt and shorts are red and blue and differs from the second figure's outfit only by the inclusion of a belt that is embellished with vertical, parallel lines drawn carefully in pencil. Also noteworthy: the arms and legs of the two main figures are colored in black crayon, while her superhero's face is colored brown, the second figure's face was left white, and the background figures are all brown. The letters 'B' and 'C' are written on her torso, in a manner that suggests this was done as an afterthought and rather hurriedly. This may be a reference to an online, hip-hop/rap artist named B-Christ (Spotify, n.d.), but there is little information available on this artist. In addition, unlike most of her cohort, *I4* drew only feet in profile, the face and body are in frontal view.

The patchwork of colors filling in the space is reminiscent of young children's "recognition of the continuity and unity of the paper surface" that results in filling in shapes they have outlined (Smith, 1993, p. 34). Using the contours of the images as boundaries is also an example of "drawing-centered" mode of drawing, meaning artistic decisions made and actions taken or not are influenced by the structure of the image and the capabilities of the medium employed (Matthews, 1999). For example, the sky extends down in the V-shape created by the linked arms of the two figures, rather than the red filling up until even with what appears as a horizon line indicated by the top of the yellow area. Also, she didn't fill in the space between the two main figures' legs. The figures holding hands with one another creates a dynamic composition. *I4* uses scale to show depth, emphasized with the diagonal line created by the linked figures in line with the house and the stick figures to the right. The house schema used here, as in many of the Ghanaian pictures, will be discussed in the next section.

Subject *I4* tells us that she saves people by making it rain, but rather than draw a rainy landscape, *I4* drew cultivated crops in the foreground of her superhero in action picture. The two girls holding hands may be friends playing their favorite game of Ampe,

a jumping game comparable to ‘rock, paper, scissors’ except using one’s feet to shoot while jumping in the air. Another way of viewing the two figures holding hands is as they would join hands during a church service. *I4* reported that her favorite school subject is RME (Religious and Moral Education). There is an interesting thematic thread among five Ghanaian participants who declared RME their favorite subject in school and the method of saving people as illustrated in the action/imagination drawing. Five girls from the Ghanaian cohort chose superpowers that provide people with food either by commanding fruit to drop from the sky or rain to fall. Similar to biblical miracles, these supernatural feats enacted to help people suggest the appeal of religious and moral instruction to be influential on the subjects’ choice of rescue themes. Another possible influence on the power and form of aid provided to help people that *I4* assigned her superhero may come from the Asante Indigenous Religion (AIR), to be explored later in this discussion in terms of re-traditionalism and religious syncretism in Ghana (Antwi, 2016).

Furthermore, *I4*’s favorite television program is *The Pulpit* with the slogan “this is the way”. This nationwide youth competition consists of teenagers competing against one another, each delivering a sermon on a chosen topic, with a panel of judges as well as viewers texting in their votes to eliminate contestants one by one, week by week, as the show airs on television. This emphasis on extolling Christian mores may also contribute to *I4* wanting to become a nurse, as well as her straightforward personality that has little patience for frivolousness or sentimentality and an inclination toward action with a sense of purpose, although at times misdirected in the form of physical aggression. This utilitarian tendency is evidenced by *I4*’s drawings, when given an opportunity to draw an imaginative self-portrait, unlike many of her counterparts who experimented with hairstyles, *I4* depicts herself without hair in all images of herself as she indeed appears in real life. Also, unlike the self-portraits of her peers who drew themselves clothed in intricately designed garments, *I4* is wearing unadorned, athletic play clothes.

Subject 16

Figure 5.16. *Set of Drawings by Subject 16*



Note. Subject 16's observation, memory, memory/imagination, and action/imagination drawings. In the speech bubbles 16 wrote, "I think you'll like this," said the superhero, "No!" exclaimed the villain, Dr. Jason.

Subject 16's set of drawings are a prime example of how males from the Greek cohort belonging to the SSSSS style profile, more so than any other group, drew their figures with round heads and either a triangular or rectangular nose. In fact, rectangular noses appear only in the Greek cohort's drawings. Notice in Figure 5.16 that 16 drew his self-portrait in the mirror with an oval face then changed to a round shaped face for the rest of the tasks. 16's work also exemplifies the use of text by Greek (17) participants, as much by girls (9) as boys (8) in their action/imagination drawing.

In his written statements, 16 explained:

I was born in Patras and I live in Molaos. My favorite subjects in schools are: History, Mathematics, Gym, Music, and Computers Science. Art is an important subject for me because I relax when I paint and draw. If I could study art outside of school I would learn to make the PAOK²² symbol. I think a work of art is joy and serenity. At home I make simple art. My brother makes a lot of collages. The place where I am most likely to see art is in school. I am one of the best soccer players, I have the nicest hair, I am unique because I am the only PAOK fan in Molaos, and my average grade is 10 in school. I am most proud of my hair, my talent for playing tennis and soccer, and I am smart. I believe I do not have any weaknesses. People

²²PAOK Football Club, commonly known as PAOK F.C. or PAOK Salonika or PAOK, is a professional Greek football club based in Thessaloniki, Macedonia, Greece ("PAOK FC," 2020).

would identify me first by my hair, my talent and then my intelligence. My favorite things to do are play with my friends, and to play tennis and soccer. My favorite things to eat are Pizza, pita souvlaki, spaghetti with meat sauce, plain spaghetti, spaghetti carbonara, and with sauce, pork chops, hamburger, lamb chops, goat, fruit, etc. There are many things I would like to become when I grow up such as a soccer player, tennis player, architect, doctor. I watch television very often, usually sports and children's programs and sometimes a movie. My favorite T.V. program is to watch PAOK play, or Real (*Real Madrid C. F. Club de Fútbol*) and Liverpool because they are my favorite teams. There are a lot of movies I like such as Spectre (James Bond) or Restitution, Star Wars etc. because they are adventures. There are a lot of songs that I like such as *Heroes*, *Hey Brother*, *Rock You*. I listen to them before playing a match. Once in a while I go on the Internet to play and to look at sports news.

I am not on Facebook but I use Twitter often. I don't have a cell phone. I play video games only when I don't have school and then only sports games. My favorite video game is FIFA 16,²³ Top Spin 4,²⁴ PES 16,²⁵ and NBA 16 because they are sports games.

16's Superhero Commentary.

My superpower is to shoot lasers from my eyes, I am immortal, with a shield and hammer to defeat all. I chose this costume to represent all of my characteristics. I have to save the people from Dr. Jason with my lasers. I live on Planet Z's like a regular person and my secret hideaway is underwater so it can't be found.

Subject 16's superhero and illustration of his superhero in action are truly an amalgamation of several superhero myth sources, with Thor and Captain America as the central influences on 16's superhero creation with some of Batman and Robin, and Superman as well. Thor, the Marvel character known as the "god of thunder," as well as Loki and Odin, who also make appearances in the Thor comic strip, are plucked right out of Norse mythology, making Thor an Asgardian, member of an alien race ("Thor [Marvel Comics]," 2020). Subject 16 lists being immortal as one of his superpowers, as one

²³FIFA 16 is an association football simulation video game ("FIFA 16", 2020).

²⁴Top Spin 4 is a tennis video game ("Top Spin 4", 2020).

²⁵Pro Evolution Soccer 2016 (PES 2016) is a single and multi-player soccer video game ("Pro Evolution Soccer 2016," 2020).

would assume a god to be having prior knowledge of the Greek gods; however, in the case of the Norse gods, they are not quite immortal because they depend on the golden Apples of Idunn to prolong their lives (Fandom, n.d.-d). In the book *Mythology*, Edith Hamilton (1942) writes that Asgard, mythological home of the Norse gods, “is a grave and solemn place, over which hangs the threat of inevitable doom. The gods know that a day will come when they will be destroyed.” Referred to as the day of doom, Ragnarok is the day when heaven and earth would be destroyed for the Asgardians (p. 442).

16 holds a shield with a star in the center that resembles the design of Captain America’s shield, has an ‘A’ emblazoned on his chest, which most likely stands for America, as Captain America has an ‘A’ on his helmet, yet 16’s superhero is also holding a hammer like Thor’s, and the colors of his costume are blue and orange, with a yellow belt and red mask (see Figure 5.20). Bearing in mind incidental possibilities for this color scheme, such as the red marker ran out of ink or someone else took a turn using red, this color scheme is rather original and does not correspond with any other superhero. Also, 16 drew himself in all of his self-referential images with prominently coifed hair, as he described in his written statement is “the nicest hair.” Indeed, the character Thor also has praiseworthy hair, making him a logical superhero for subject 16 to emulate. The mask and the power to shoot lasers from his eyes seem to be adopted from other superhero sources, possibly Robin for the mask and Superman, who not only has x-ray vision but can also shoot heat rays from his eyes. Missing from 16’s costume is a cape, which is not so surprising since although Thor wears a cape, Captain America does not, in addition to neither Thor nor Captain America ostensibly having the power to fly.

Figure 5.17. *Possible Influences for Background Elements in 16's Action/Imagination Drawing*



Note. 16's action/imagination drawing illustrating his superhero using lasers to defeat Dr. Jason (left), cartoon Viking ship with a dragon's head bow (center) (Zazzle, n.d.), cartoon desert with camels at sunset (right).

Looking at 16's setting for his superhero in action raises curiosity. The background of 16's action/imagination drawing is remarkably cartoonish, possibly influenced by the children's programs 16 likes to watch on television (see Figure 5.17). In his action/imagination drawing, there are mountains or hills in the background, two cacti, and a sort of camel-like creature without a hump or perhaps a dragon, which may be a reference to a Viking ship. There is also a villain named Dr. Jason sprawled on the ground from whom 16 is saving people. Another possible explanation for the desert locale comes from *Thor* (Watiti et al., 2011) the movie, in which Thor is exiled to earth for his arrogance by his father Odin, and stripped of his godly powers. Consequently, Thor lands in New Mexico, United States (see Figure 5.18), in a desert landscape, which may be the catalyst for 16's illustration.

Figure 5.18. *Scene from Thor (2011) Located in the Desert of New Mexico, USA*



Note. Scene from the movie Thor (2011) showing Thor landing on earth in the fictional town of Puente Antiguo, New Mexico, USA (Movie Maps, 2016).

Dr. Jason was most likely inspired by Dr. Jason Woodrue, a villainous character from DC Comics who made an appearance in the 1997 action, sci-fi movie *Batman and Robin*, a movie subject 16 is likely to have seen on Greek television (Schumacher, 1997). Dr. Jason Woodrue (Fandom, n.d.-f) was a corrupt scientist who once worked for and was funded by Wayne Enterprises.²⁶ After Wayne Enterprises fired him and cut his funding, Woodrue moved to a remote South American lab to continue his experiments using plant toxins to create “Venom,” a super-serum (Fandom, n.d.-f). The villain in 16’s action/imagination drawing is green, just as Dr. Woodrue appears bathed in a green hue in Figure 5.19. In addition to the Dr. Jason Woodrue reference from the *Batman and Robin* movie, Batman’s hideaway, the bat cave, is subterranean and may have given 16 the idea for an underwater refuge, in addition to this subject’s home town of Molaos actually being near the seaside (Schumacher, 1997).

²⁶Wayne Enterprises is the company of fictitious millionaire Bruce Wayne, the true identity of Batman.

Figure 5.19. *Cultural References for 16's Action/Imagination Drawing*



Note. Dr. Jason Woodrue (left) (Fandom, n.d.-e), Robin (center) from the *Batman and Robin* movie (1997) (Fandom, n.d.-i), Thor (right) from the movie *Thor* (2011) (PNGwing, n.d.).

Another puzzling facet of 16's superhero character is that he is holding a hammer that looks very much like the one belonging to the character Thor. There are a few instances, over the years, in Marvel comic books, especially the *Fear Itself* series and *Avenger* movies, in which Captain America is able to lift Mjolnir, Thor's hammer, in order to return it to Thor as they are battling a villain ("Fear Itself" (comics), 2020). These scenes are particularly memorable because the god Odin put a spell on Mjolnir allowing only beings who are worthy the ability to lift the hammer (Jasper, 2019).

It is also interesting that 16 is not on Facebook but uses Twitter often, despite also not having a cell phone. Facebook tends to be more about ongoing social networking where one can write volumes if one is so inclined, whereas Twitter, by comparison, is more about direct conversation, with limited space, thereby requiring one to be concise and to the point (Webtegrity, n.d.). This fits with 16's written profile in which he describes himself and his passions clearly and consistently. Being such a big sports fan and athlete, using Twitter to relay game scores and team information, match times, and

Figure 5.20. Comparison of 16's Imagination Drawing with Captain America



Note. 16's imagination drawing (left), Captain America holding his shield and wielding Mjolnir (right) in a scene from the movie *Avengers 4 Endgame* (GetintoPik, 2020).

commentary on sporting events makes sense, since the Twitter platform supports direct communication and expediency.

From his self-reporting, we know that 16 is a top student and athlete. As much as he loves sports, he lists playing with his friends first when naming his favorite thing to do outside of school. 16 exudes self-confidence in a humorous rather than arrogant manor, such as having a reputation for having the best hair, and clearly illustrating his hair in the self-portraits. 16 knows himself, he thinks for himself, indeed it is no easy feat to be the only PAOK fan in Molaos, where one is either a Panathinaikos or Olympiacos fan—a rivalry akin to the Yankees and Mets, being a PAOK fan in Molaos is like living in New York and rooting for the Boston Red Sox. There is a sense of honor in 16's forthright description of himself that makes admiration for the superheroes Thor and Captain America obvious choices, since both of these heroes are exemplars of decency.

Subject 10

Figure 5.21. *Set of Drawings by Subject 10*



Note. Subject 10's observation, memory, memory/imagination, and action/imagination drawings.

In her written statements, 10 explained:

My favorite subject in school is science. Art is important to me because I can explore so many new things about art. I would not like to study art outside of school because I have so much stuff to do that I don't have time for art. If I could learn anything about art I would like to learn who made art and what art is for. I think a work of art is an image in your mind. I do not make art at home but if I did I would make funny and cool art. No one in my family makes art. I am most likely to see art at my house.

I am a funny girl who likes to play sports like baseball, and soccer for fun. I do karate. I would describe myself as imaginative, cautious, funny. What I really like about myself is I care about my family and friends. My weakness is to write neat, that I want to improve. I think other people would say that I am nice and funny. My favorite thing to do is play sports. My favorite foods are pizza, pasta, and ribs. The most important thing to me is my family. If I could change one thing in my life I would change my behavior. When I grow up I would like to become a lawyer.

When I am not in school I like to go to the park with my friends. I like listening to music with my brother. I do dancing for fun. I play baseball. I sometimes finish my homework and sometimes it is hard for me. I hardly use the computer. I sometimes read. My whole family spends a lot of time on Christmas. I sometimes watch TV. I like to watch funny TV. I like *Liv and Maddie*²⁷ because it is fun and funny to watch. My favorite movie is *Step*

²⁷*Liv and Maddie* (Beck et al., 2013-2017) is an American comedy television series that aired on the Disney Channel about identical twins. Actress Liv Rooney has just returned home after finishing a four-year stint in Hollywood, filming a popular television show. Her identical

*Dogs*²⁸ It is funny. I use the Internet sometimes when I am bored. I use Instagram once in a while. I use an iPad sometimes. I don't play video games.

10's Superhero Commentary.

My powers are flying and invisibility. I double myself to save people. My picture is about stopping the bad guy from destroying the home of Power Girl.

Like subject *16* from Greece in this schematic grouping, *10* also drew an oval-like shape for her face in her observation drawing, then switched to a round head in all subsequent self-representations in the drawings that followed. It is noteworthy that the facial features are consistently, and increasingly schematized across tasks,²⁹ as many of the drawings in general across cultures became more schematic in the final action/imagination drawing. Two possible explanations for when children's drawing is inhibited is they have a small repertoire of schemata and are limited in their ability to apply them to making different images. Furthermore, these limitations are made apparent when children attempt to draw something they have little experience trying to draw. (Thomas, 1995, p. 117). We see this dynamic in many of the sets of drawings, especially

twin sister, Maddie, is a tomboy with a facility for sports, but with a particular talent for basketball (IMDb, n.d.-b).

²⁸*Step Dogs* (Anderson, 2013) is a film about a pampered female dog from the big city moves to a farm and is forced to move in with a farm mutt, and the newfound kennel-mates refuse to get along. But when two bumbling criminals try to rob the house while the owners are away, the two dogs must put aside their differences and thwart the bad guys ("Liv and Maddie," 2020).

²⁹For instance, in the memory and imagination drawings executed on the same page, the eyes are large and circular in shape with eyelashes extending up from the top eyelids, the nose is a modified check mark as used from the beginning in the observation drawing, and the mouth is a wide curve with short lines at either corner of the mouth which can be read as a convention for indicating dimples. In the action/imagination drawing showing the heroine multiplied into three selves, the facial features have been further simplified into a circular face, dots for eyes, the nose which was the most schematic from the beginning disappears, a bent line smile with dimple marks for a mouth and eyebrows on the center figure that lend the expression a look of determination.

in the schematic profile, once the drawing challenge moves from observation to employing memory and imagination.

Figure 5.22. *The Powerpuff Girls*



Note. *The Powerpuff Girls* cartoon leading characters: Bubbles (left), Blossom (center), Buttercup (right).

With ‘The Power Girl’ written across her superhero’s top, *10*’s heroine is almost certainly inspired by the cartoon and movie spinoff, *The Powerpuff Girls*³⁰ in appearance as well as by emulating the show’s storyline (McCracken, 1998- 2005). *10* drew herself with a large head and a small body similar to, but not as exaggerated in proportion as the cartoon *The Powerpuff Girls*. Her facial features somewhat parallel the *Powerpuff Girls* with a round face, large eyes, no nose in the fourth task, curved line for a smile, and simplified flipped bob hairstyle that appears to be a synthesis of *Buttercup*’s with her own. *10* has the power to multiply herself, thus becoming a team of three members, as are the *Power Puff Girls*. However, the costume colors do not coincide with the *Powerpuff Girls*, who wear blue, pink, and green, whereas *10* distinguishes herself in a silver

³⁰The Powerpuff Girls is an American superhero animated television series created by animator Craig McCracken for Cartoon Network (“The Powerpuff Girls”, 2020).

costume from her super body doubles each wearing a red top and blue bottom, colors widely assigned to superhero attire.

Figure 5.23. Comparison of Subject 10's Drawings with Cartoon



Note. Powerpuff Girls cartoon (left), 10's memory/imagination drawing, 10's action/imagination drawing.

The importance of family declared by 10 in her statement may be the reason she chose the *Powerpuff Girls*, who are sisters, to imitate, as well as being a popular, long-running show toward which she may feel nostalgic with a sense of home. Intriguingly, the *Powerpuff Girls* were created in a lab by *Professor Utonium* imbued with superpowers by *Chemical X* being accidentally added into the mixture of 'sugar, spice and everything nice' used to procure the three kindergarten-age superheroes ("The Powerpuff Girls," 2020). In the action drawing, 10 illustrates her 'Power Girl' doubling herself to help people and keep the criminal from destroying her home. As with 10's superhero backstory, protecting their hometown from various nefarious villains is also the main objective for the *Powerpuff Girls* cartoon. Another possible influence on 10's *raison d'être* may have been borrowed from the plot of her favorite movie, *Step Dogs*, in which two anthropomorphic dog characters thwart robbers from burgling their owners' house while they are away.

There are elements in 10's renderings that are worth noting for their uniqueness. For instance, 10 is one of the few participants to draw a background in the memory/

imagination drawing, which was not a requirement. The composition of both sky scenes is similar, with the sun in the upper left corner, showing figures among the clouds without showing the ground at all. It is also interesting how *10* drew arced lines to symbolize the action of her body doubles being generated on either side of her figure in the center of the page. *10*'s characters are hovering in a sky full of clouds, with smaller clouds gathered under the feet of her clones like floating platforms. Plus, while her doubles are smiling, *10*, with a determined look on her face, exclaims, "ha, ha, ha, ha," yet another interesting aspect, which implies the existence of a nemesis outside of the picture plane without having to go to the effort of drawing another figure.

Drawings Exemplifying Mixed Style

Figure 5.24. *Mixed Observation Drawings*



Note. Mixed observation drawings by subjects 59 male from Ghana, 22 female from Greece, 1 male from New York.

Out of 72 participants, 20 scored mixed, nearly the entire cohort from Ghana, 5 from Greece, and 4 from New York. The mixed style is a combination of naturalistic and schematic features. The mixed self-portraits appear more closely drawn from observation and share common traits.³¹ Although most of the participants in the mixed group declared

³¹To remind the reader what mixed means, the shape of the face is drawn as more of an oval and is more articulate than in the schematic self-portraits, especially in describing the shape

science, math, or religious instruction to be their favorite class in school, the members of this style group also said art is a worthwhile subject of study and that they do drawing at home.

Subject 59

Figure 5.25. *Set of Drawings by Subject 59*



Note. Subject 59's observation, memory, memory/imagination, and action/imagination drawings.

In his written statements 59 explained:

I was born in Brong-Ahafo, located just north of the Ashanti region. I live in Wadie Adwumakase with my parents and am the third of six siblings. We are Christian, Seventh Day Adventists. My father is a farmer and my mother does not work. My favorite subject in school is Creative Arts. Outside of school I would like to learn how to play the guitar. A work of art is something you use your hands to make. At home I draw people in action playing football. One of my siblings draws people fist fighting. My sister and I sing in church. I see art sometimes when I go to Kumasi, there is someone pushing a wheelbarrow selling art.

I am a respectful boy. I don't think a lot about wrong things that people have done to me. If I could change one thing about myself it would be my

of chin. Nearly all of the eyes are a modified lens shape, some have eyelids, about half have eyelashes, and many of the pupils have shading. Most noses are depicted with two nostrils but are not shaded. The mouth is drawn showing two distinct lips but without shading. The shape of most eyebrows are drawn and filled with individual hairs. The outside shape of the ears is drawn carefully with some attempted description of the inside. Hair covers part of forehead rather than sitting on top of the head. Necks are mostly too narrow, either straight or angled and curved into shoulders that are also too narrow.

anger. The most important thing to me is to continue my education when I grow up. I would change the way I dress sometimes when I pull my pants down to show that I am a nigga. I learned about this fashion in Kumasi and on Ghanaian television. To me nigga means something cool and my friends do it. I feel pressure from my friends to do it too.

I want to be a football (soccer) player when I grow up. I play in a league and we play other towns. I listen to gospel and dance. We go on family outings to Dome.³² I do 30 minutes of homework a day. There is no computer at home. I read the Bible for pleasure. Every Sunday I go to church. My favorite holiday is Christmas. My chore at home is pounding fufu.³³ My job is washing the taxi drivers' cars for money.

We have one TV that I watch every day. *Lazytown*³⁴ is my favorite program. My favorite movie is *Bean*.³⁵ My favorite television commercial is *Girls Casa* which means 'Girls Talk Much.' I do not have Internet access or a cell phone. I play video games at the game center once or twice a week. My favorite video game is soccer.

59's Superhero Commentary.

My superpower is to command trees to fall down. I wear a yellow costume and red cape with a sword riding a skateboard. My costume has spiders on it. I save people with a command from my mouth to fell trees.

59's observation drawings fall solidly within the description of a mixed drawing with the shape of the face, especially the chin given consideration and some features using contour line to describe the shape of the nose and lips, with attention to details such as including the philtrum. The neck descends at too much of an angle into narrow shoulders. The body is drawn in proportion and in profile when it is in action. In his memory drawing, 59 drew himself wearing his school uniform, showing the shirt collar,

³²Dome is a town bordering the capital city of Accra region ("Dome," 2017).

³³Fufu is a dish, common in West and Central Africa, traditionally made with boiled cassava and green plantain pounded until the consistency of dough ("Fufu," 2020).

³⁴English-language Icelandic television series made by an international crew and performed by a cast from Iceland, the United States and the United Kingdom based upon a children's book created by Magnús Scheving ("Lazytown," 2020; Scheving, 2002–2014).

³⁵*Bean* is a comedy film, based on the British sitcom *Mr. Bean*, starring Rowan Atkinson as a well-intentioned but bumbling security guard (Smith, 1997).

buttons and pockets, standing barefoot, with a surprised expression on his face, as if he is looking straight at his audience. His memory/imagination drawing is in complete profile wearing a helmet and mask and riding a skateboard. There are three figures in the action/imagination drawing. The composition feels like a book illustration selectively showing us the relationship between the superhero protagonist and the victims being saved connected in space by a patch of grass that grounds the scene, the figures scaled smaller to convey depth within the pictorial space.

Figure 5.26. *Comparison of 59's Superhero with Media Images*



Note. 59's superhero (left) riding a skateboard like the superhero Sportacus (center) (Sportacus, 2017) from 59's favorite television program LazyTown and Marvel Comics' Spider-Man (right) (PNGImage, n.d.).

Unlike the proliferate number of Superman-esque superheroes, 59's superhero stands apart from most of his peers in originality and as a reflection of national cultural trends of re-traditionalization, which meld the traditional with the contemporary. On the surface, it appears that 59 has created his own interpretation of 'Spider-Man' that is a hybridization of the traditional *Anansi* story, the DC comic *Spider-Man*, and the *Sportacus* superhero from his favorite television show.

Anansi is an Akan folktale character who often takes the shape of a spider. Anansi, which means "spider" in the Twi language of the Asante peoples, is a trickster spirit with knowledge of all stories ("Anansi," 2020). Fond of parables, the Akan use myth to

express the paradox of God being close to human beings, and at the same time, far from them (Marshall, 2007). The Anansi stories, called *Anansesem*, explain how Anansi brought both wisdom and stories to earth as a mediator between humankind and Nyame, the omnipotent deity that lives in the sky. Using clever tactics, Anansi accomplished dangerous labors in payment for the Sky-God's stories. Impressed, Nyame declared that every story, no matter the subject or theme, is called a Spider story ("Nyame," 2020). Many of the subjects in the Ghanaian cohort reported the Anansi storybooks among their favorites to read.

On the other hand, the American Marvel Comics character Spider-Man is a man named Peter Parker who became a superhero when he was bitten by a radioactive spider. Having obtained super arachnid abilities, Spider-Man then uses his superhuman abilities to help people. ("Spider-Man," 2020) The Spider-Man character has been portrayed in comic books, cartoons, television programs, and movies.

The television show *LazyTown* is about an eight-year-old girl who moves to *LazyTown*, where she finds people live inactive lifestyles. This is changed with the help of *Sportacus*, a superhero who brings happiness to *LazyTown* by teaching the inhabitants of to partake in athletic activities. The villain, *Robbie Rotten*, devises schemes to make *LazyTown* lazy again ("Lazytown," 2020). At times, *Sportacus* rides a skateboard, much like 59's superhero (see Figure 5.26).

Movement and athletic prowess are common denominators for Sportacus and Spider-Man, who both move with strength and agility. Sportacus does parkour, the activity or sport of moving rapidly through an area, typically in an urban environment, negotiating obstacles by running, jumping, and climbing. Spider-Man moves in a parkour-like manner, however using webs to negotiate the urban landscape in a way that someone doing parkour would if they possessed an arachnid's phenomenal powers. Anansi, however, is a master of transformation and metamorphosis. The Anansi ethos is about using cunning to outwit an opponent and to achieve one's goals (Marshall, 2007).

Figure 5.27. 59's Action/Imagination Drawing



Looking at 59's action/imagination drawing in light of his superhero power of commanding the tree to fall, is intriguing because of the indirect method of helping people, and also suggests that trees most likely have a certain importance worth investigating. In addition, the way the breath of the command is illustrated, much like the outlining of the x-rays from Superman's eyes in 34's superhero depiction (Figure 5.27), emanating from his mouth and encircling the trunk of the tree as though the colored contour embodies a powerful force, sparks interest in the viewer.

Also, delving into the Asante Indigenous Religion (AIR) reveals possible influences on the drawings by 59, such as the relationship between the Asante people and God. According to the Reverend Eric Antwi, it is widely believed that spirits, deities, and ancestors serve as intercessors between God and people on earth, facilitating and insuring that human beings receive a good harvest, children, rain, and everything needed for human life to flourish (Antwi, 2016, p. 45). In addition, these spirits are believed to manifest themselves in trees, rivers, stones, and charms (Antwi, 2016).

A clue to the role of the tree may also be found returning to *Anansesem*. In a society with a strict social code, the Anansi stories served as a means for people to

indirectly express their frustrations and criticisms of authority in a way that was considered appropriate by the Asante Kingdom (Marshall, 2019). An example of this indirect approach is talking to the ‘shade tree’ or ‘tree of reception’ as it is also known. The shade tree was of central importance in an Asante village; it was closely associated with the chief of the village or the King, and their spirits were believed to occupy its branches. Often villagers would ‘talk to the shade tree’ to voice injuries they would have liked to address to the chief or King (Marshall, 2016).

59’s superhero self-portrait, like all of the superhero self-portraits we have looked at thus far, is a graphic and conceptual synthesis of influences from various sources. Considering 59’s fourth drawing in light of AIR beliefs provides at least a partial explanation for his superhero having the power to direct the natural world to act on behalf of people in peril as well as showing the important role that nature and natural phenomena play in the spiritual lives of the Asante.

Subject 22

Figure 5.28. *Set of Drawings by Subject 22*



Note. Subject 22’s observation, memory, memory/imagination, and action/imagination drawings. In the speech bubble the thief says, “I will take everything!”. 22’s superhero tells the thief, “You can’t go inside!”

In her written statements, 22 explained:

I was born in Sparta and live in Molaos. My favorite subject in school is music because it entertains me. I would like to learn how to draw better. I

think a work of art is a beautiful picture made by an artist. At home I like to paint. My father is a professional musician with the Athens Symphony Orchestra. I see art on the stage at the Rigas Feraios Theater in Patras. I am an artistic person; imaginative, sensitive and shy. I have a lot of stamina. I like to put songs on and dance. I am proud of my imagination. People see me as sensitive. I would like to be tougher. I am studious and love learning. My favorite thing is spending time with my friends and family. My favorite food is spaghetti with sauce. The most important things to me are health, serenity, and family. If I could have one thing it would be money. When I grow up I would like to become a gym teacher or fitness trainer. When I am not in school I like to spend time with my friends, play computer games, read books, take music lessons and do rhythmic gymnastics. I also like to spend a lot of time with my family. Every Easter I become a myrrh bearer.³⁶ I am an industrious person. I like to earn money babysitting. I like children's programs and adult shows too. I watch television about four times a week. My favorite television program is *Garfield*. My favorite commercial is *Super Barbie*. My favorite movie is *Romeo and Juliet*. My favorite song is *Jamaica* because it is an uplifting song and we sing it in music. I use the Internet to find information. I play my favorite video game *Boo*³⁷ alone on my mother's cell phone. I like *Boo* because I take care of her.

22 Superhero Commentary.

My superpower is to throw water in all its forms. I chose this costume so that I can swim and fly. My symbol is H.K. (her initials) I can make a house out of ice and live wherever I please when I don't have a home. Usually however I live in an invisible basement in my house which contains many valuables. In my action drawing, I threw ice at the robber and froze him. Then I sued him and he went to jail.

22's set of drawings is an example of the mixed profile from the Greek cohort. Her self-portrait is a combination of naturalistic and schematic components, such as the shape of the face, eyes, and nose, which look drawn mainly from observation, whereas the lips are curved into a bow-like configuration, the hair is spun out in coils, the chain of her necklace appears almost to hang from her chin, and the facial features are too large for

³⁶During Greek Orthodox church services on Easter Holy Friday, a group of young girls in white robes and carrying baskets of flower petals represent the myrrh bearers, the group of women who came to the tomb to anoint Christ's body and discover he has risen, in the procession of the epitaphios.

³⁷My Boo - Your Virtual Pet Game is a video game by Tapps Technology owned by Microsoft (Microsoft, n.d.).

the area of the face. Yet, despite the lack of proportion, this visage possesses a stylistic quality that supersedes its incongruencies and feels in some respects artistically mature.

Looking for visual influences on 22's observation drawing image from the interests she reported led to two possible sources; one is an image of Barbie based upon the doll manufactured by the American toy company Mattel, from the official Barbie You Tube channel, and the other is an icon of Mary Magdalene, one of the three Marys, known as the myrrh bearers in the Christian Orthodox tradition, who discovered Jesus's tomb empty after the resurrection in the New Testament. The self-portrait drawing by 22 has parallels to the Barbie image with the shape of the face, the eyes with saucer-like pupils, and particularly the manner in which the eyelashes are drawn in short, bold, curved lines evenly spaced across the upper lid. The uniform, gently arched eyebrows are shaded in (as opposed to using sketchy lines for indicating hairs), and the mouth has a similar central curved line, although Barbie's smile shows teeth, as the overall contours of the mouth bear a resemblance. Both figures are wearing a short necklace with a pendant visible in the center of the neck, just at the level of the collar bone, and a shirt with a V-neck collar and striped pattern.

Figure 5.29. *Possible Visual Influences on 22's Observation Drawing Image*



Note. 22's observation drawing, Barbie video image (@Barbie, 2019), Mary Magdalene myrrh bearer icon (OramaWorld, n.d.).

The icon of Mary Magdalene is included for comparison here with the observation drawing and Barbie image, since 22 mentions that she performs as one of the myrrh bearers during Easter celebrations. Characteristic of the mixed group, 22 drew the nose illustrating both nostrils but with lines extending up toward the bridge of the nose, almost to the eyebrows. This configuration for the nose may be influenced, in part, by the Byzantine icon style of facial representation. Also, the image of Mary Magdalene is typically shown with long, curly hair. It is also possible that the robes covering the saint's head could mislead a novice artist who is copying a reproduction by creating the impression that the facial features are located higher up on the facial plane than is actually correct, as 22 did in her self-portrait.

Figure 5.30. *Comparison of 22's Action/Imagination Drawing with Movie Image*



Note. 22's superhero freezing the thief with a shower of ice (left), Elsa character from the movie *Frozen* (right) (Wallpaper Flare, n.d.).

Turning the focus onto 22's superhero, even though she identifies *Romeo and Juliet* as her favorite movie, the movie *Frozen* is clearly the influence on her superhero and choice of superpowers (Buck et al., 2013). *Frozen* is a computer-animated musical fantasy film that may also appeal to 22 because of her interest in music, dance, and theatrical performance. Not only is music 22's favorite subject in school, but she also enjoys putting on music and dancing in her free time. The storyline of *Frozen* centers around two princess sisters, Elsa and Anna. The elder sister Elsa has magical powers she

does not fully understand to create and control ice and snow. Elsa accidentally harms her sister Anna with her powers but learns that with love she can control her powers and ultimately saves Anna through an act of true love (IMDb, n.d.-c). It seems reasonable to surmise that when asked to invent her own superhero, 22 projected the character Elsa and her magical powers onto her own heroine, which she personalized by thoughtfully designing her own logo, using her initials in the shape of a crown (see Figure 5.30), again making reference to the Disney story princesses. Like Elsa, 22's superhero "can throw water in all of its forms." And as the movie character Elsa, who in self-imposed exile created her own ice castle, so too 22 declares she has the power to make a house out of ice so that she might have a place to live wherever she goes. In Figure 29, comparing a scene from the movie *Frozen* with 22's superhero figure in action drawing, we see 22's heroine hovering upright in flight, looking much like Elsa in the movie still on the left, who also wears a long dress that drapes down at an angle by her feet. Both female protagonists are depicted casting ice from her hands, and both have an ice blue castle in the background on the far right side.

Figure 5.31. 22's Superhero Insignia



Note. 22's symbol in the shape of a crown for her superhero's costume.

Looking at the composition of 22's action drawing, space is depicted with mixed points of view, such as the picture plane turned up to show us the hopscotch board on the ground as well as the flower bed, while the trees in the foreground and building in the background form multiple baselines, typical in drawings by this age group. Realizing that 22 is depicting her heroine in flight, we understand that this is her interpretation of an aerial view. However, the pitched view may also be informed by the terrain of the landscape of the place where 22 lives. The town of Molaos, Greece is built on the side of a mountain, making the streets of the town quite steep, with most buildings having a panoramic view of the valley below. The photo of the elementary school playground in Figure 5.32 shows the altitude of the playing field against the side of a mountain in the background, which, viewed alongside 22's action drawing, may indicate that topography plays a role in her sense of space as reflected in her action illustration.

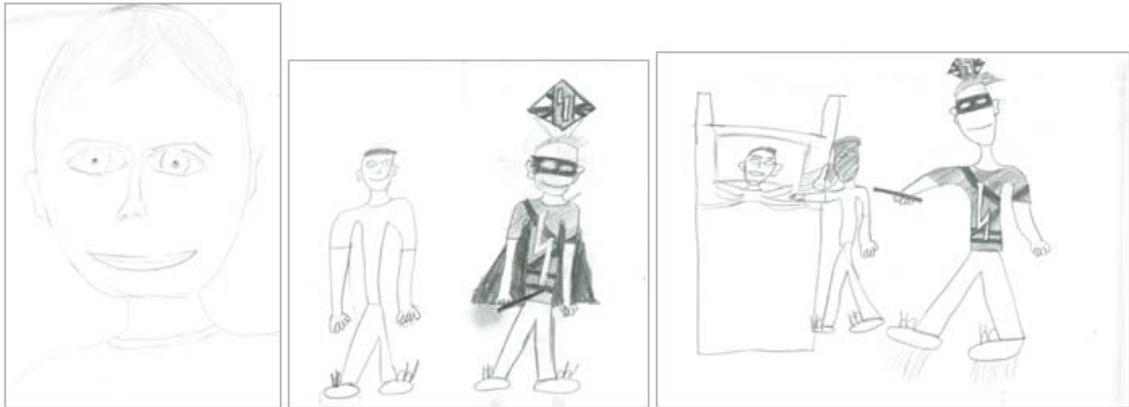
Figure 5.32. *Comparison of Action/Imagination Drawing with School Playground*



Note. 22's action/imagination drawing (left), view of the elementary school playground in Molaos, Greece (right).

Subject 1

Figure 5.33. *Set of Drawings by Subject 1*



Note. Subject 1's observation, memory, memory/imagination, and action/imagination drawings.

In his written statements, *I* explained:

I was born and raised in Mount Kisco, NY. My favorite subject is math. Art is important because it helps to develop yourself. I do not wish to study art outside of school. If I could learn anything about art it would be how to put a lot of detail in my artwork. I think a work of art is a very detailed artwork. At home I make cartoons. I am likely to see art everywhere, I see many shapes. I am an athlete. I am tough, gentle, obedient, a leader, adventurous, hardworking, playful, funny, serious, social. My strongest characteristic is being a leader. I am proud of myself for playing sports. I watch television a few times a week. I like a lot of different programs. I like the Taylor Swift- Jumpman³⁸ commercial because it is funny. I use the Internet to do homework almost every day. I don't use Facebook or have a cell phone. I play video games a lot in my living room with friends. My favorite video game is *Destiny*³⁹ because it is addicting.

***I*'s Superhero Commentary.**

My superpower is to give other people superpowers to defend themselves. Someone was being robbed and I gave them powers. They hit the person with fists that he summoned. Once they defend themselves they lose the power. I also can fly. I have a cape because I can fly. The gem over

³⁸Commercial for *Apple Music* with *Taylor Swift* rapping to the song *Jumpman* by *Drake*.

³⁹*Destiny* is an online-only multiplayer first-person shooter video game. It is a console game that would be played in a livingroom.

my head gives me power through my wand. If I lose it I have no power. I live in a different world where everyone has power.

In *I*'s set of drawings, the facial features become more schematic from the self-portrait from observation to the subsequent drawings, especially the nose, which evolves into a check mark and then disappears altogether, and the crescent-shaped mouth simplifies into a slightly curved line. Like most of the New York drawings, the only part of the body that is in profile is the feet. By turning the plane of the bed up to show us the person in jeopardy defending himself, we get a fuller view of the action while also avoiding the use of foreshortening.

In his imagination drawing, the motif on *I*'s chest and gem above his head resembles the insignia on the superhero *Flash*'s costume. The Marvel comic superhero *Flash* finds he has the power of super speed after being struck by lightning. Speed is certainly an ability that an athlete like *I* would value and choose to have. However, aside from the insignia, the similarities between *I*'s superhero and *Flash* basically end there. The zigzag-like design *I* emblazoned on his superhero's costume may also have been adopted from the emblematic symbol on a high voltage warning sign (see Figure 5.34).

Figure 5.34. *Possible Visual Influences on I's Memory/Imagination Drawing*



Note. *I*'s imagination drawing (left), *Flash* superhero (center) (Levins, n.d.), high voltage sign (right) (Display2Go, n.d.).

Having searched *I*'s commentary for visual references led to the conclusion that *I*'s superhero and superhero self in action are particularly noteworthy; even though the graphic depiction might not directly relate to a particular video game, conceptual video game references are interwoven into the hero and the scenario. There are two issues here especially relevant to enriching the discussion; one is the superhero's quasi-scientific powers and the other is how the dynamics of the action scene echo ways in which multiplayer video games are played. Generally speaking, 'superpowers' are imaginary extensions of human abilities, such as super strength or speed, or based on quasi-scientific ideas, such as bionics or x-ray vision. Some of these subjects are incorporating alternative forms of consciousness in their creative work, such as artificial intelligence (AI), telekinesis, teleportation, and mind control. *I* explained that his superpower is to give other people powers to defend themselves. The person in bed is about to be robbed by an intruder wearing a mask. The victim uses his newly acquired powers to materialize a disembodied hand that he telepathically manipulates in the air as a weapon to defend himself against the thief. The battery-like gem over the superhero's head to power the wand and the remotely controlled fist are variations on video game tropes.

I's favorite video game, *Destiny*, combines role playing with a modified version of massively multiplayer online game features (MMO) in which the game connects players only with certain players randomly, rather than allowing all players to communicate freely amongst themselves ("Destiny (video game)," 2020). The game takes place in a science fiction world 700 years in the future in which players are *Guardians* defending the human beings and the last safe city on Earth against aliens. *Guardians* are accompanied by a non-playable character (NPC) called *Ghost*, which is a robot artificial intelligence (AI) ("Destiny (video game)," 2020). *Ghost*, as shown in Figure 5.34, resembles the gem over *I*'s superhero's head. In addition, this game has voices for NPC characters like *Ghost* played by major actors such as Peter Dinklage, famous for his role

in *Game of Thrones*, the HBO-sponsored series based upon a best-selling book (Benioff et al., 2011–2019; “Game of Thrones,” 2020).

Figure 5.35. Comparison of *I*'s Power Gem with Video Game Character

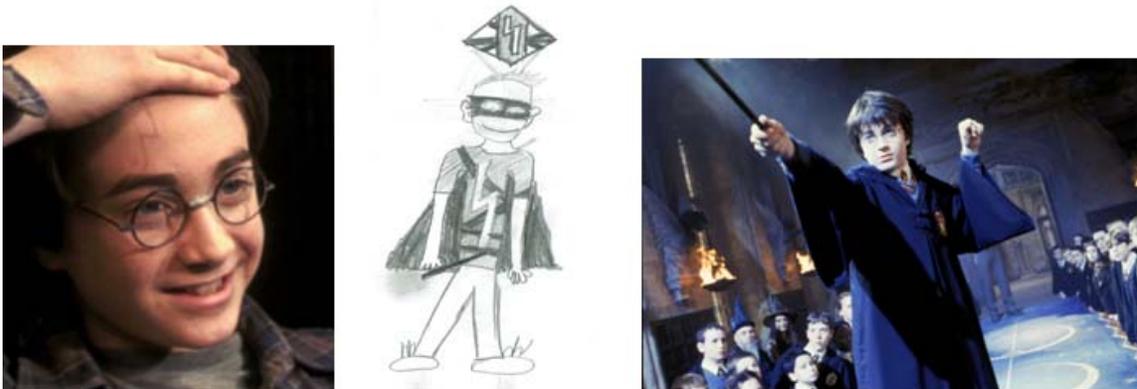


Note. The gem over *I*'s head in his superhero self-portrait and the Ghost from the video game *Destiny* (“The Ghost,” 2015).

When video games are played as a group, the players often help one another against some perceived enemy, including lending each other powers for defense. In addition, video game players' avatars usually need to stay powered or fueled in some way; otherwise they are eliminated. The energy source is usually maintained through earning points for some sort of achievement in the game. For example, in the game *Destiny*, ‘experience’ points are generally awarded for successful role-play and defeating opponents, overcoming obstacles, and completing a mission (“Destiny (video game),” 2020). Also, players get to customize their *Guardian* by choosing class, species, and appearance; each class and subclass come with its own set of abilities. This option to choose one's own skills is similar to the action scene in which *I* gives the ‘victim’ his choice of superpower with which to defend himself from the intruder.

Notwithstanding congruencies in game play and certain characters, *I*'s illustration of himself as a superhero does not physically look like any of the characters from the actual *Destiny* game. Most notably, *Destiny* is essentially a shooter game, whereas *I*'s hero wields only a wand that projects agency through telepathic avenues and not weapons of destruction. The democratic superpowers invented by *I* to empower others show him to possess leadership qualities, a characteristic admired by *I*. This superhero with a wand who leads by supporting those around him suggests a possible connection with the Harry Potter series of books and movies (Columbus, 2001; Rowling, 1997). Given the general popularity of the Harry Potter character and franchise, it is reasonable to conclude that this may have played a role in *I*'s artwork, even though he did not refer to it directly in his commentary. *I*'s superhero insignia is almost identical in shape to the scar on Harry Potter's forehead except for being in reverse, and like *I*'s superhero, Potter uses a wand to direct his magical powers (see Figure 5.36). Also, *I* declared that his superhero lives in a world where everyone has power. Similarly, in the Harry Potter story, the wizarding world exists parallel to the ordinary world. Like all of the subjects' work discussed thus far, the invention of *I*'s superhero and superpowers is indeed a composite of influences, both visual and conceptual, from a host of sources.

Figure 5.36. Comparison of *I*'s Memory/Imagination Drawing and Movie Character



Note. Harry Potter revealing the scar on his forehead (left), *I*'s superhero (center), Harry Potter using his wand.

Drawings Exemplifying Mixed Observation/Schematic Profile Group

Figure 5.37. *Mixed Observation/Schematic Drawing*



Figure 36. Observation Drawings by subjects 26 female from Ghana, 15 female from Greece, 30 female from United States.

Sixteen out of 72 subjects belong to the mixed/schematic profile, the group responsible for results showing a shift in drawing style worthy of attention that occurred from the observation to memory drawing. Although their first task was scored as mixed, there are noteworthy variances in characteristics amongst the observation drawings belonging to the mixed/schematic group (see Figure 5.37).⁴⁰ Of the 16 subjects belonging to the mixed/schematic set, 10 reported that they do not do art at home, with 9 out of 10 being female. Surprisingly, nearly all members of the other two main style profiles, schematic and mixed, reported doing art at home regardless of whether or not they deemed art a worthwhile pursuit. Therefore, it could be argued that the absence of self-motivated art-making, heuristic learning experiences accessed outside of the classroom, played a role in subjects changing from a mixed style to a plausibly more comfortable schematic style when challenged by the study task.

⁴⁰The shape of the head tends to be round, and the features in many of the mixed/schematic self-portraits are not placed correctly within the contour of the face, noticeably drawn too high up in the facial plane. In addition, subjects in the mixed/schematic group tend to depict the eyes as ovoid in shape, but generally no eyelids are articulated.

Subject 26Figure 5.38. *Set of Drawings by Subject 26*

Note. Subject 26's observation, memory, memory/imagination, and action/imagination drawings.

In her written statements, 26 explained:

I was born in Wadie. I live with my parents. I have five siblings. I am the oldest. My father sells shoes and my mother is a teacher. She teaches in the next town, Dominase. Our religion is Pentacostal, True Disciple. My favorite subject in school is Creative Arts. If I could study art outside of school I would like to learn weaving. I think a work of art is done by someone who draws and sells their work. I do not do art at home. The art I see is someone weaving baskets. I am a calm girl, also respectful. If I could change something about myself I would frown less. My favorite thing to do is skipping. The most important thing to me is helping someone. I would like to become a teacher when I grow up. Outside of school I play Ampe with my friends and dance Akayida. I do not play sports. I do my homework every day for 30 minutes. I go to church every day. We read the Bible verse. My favorite holiday is Easter. I fetch water and go to the refuse dump to throw the refuse away. I do not have access to a computer. We have one television I watch every day. I like to watch movies. I like *What Life Took From Me*. My favorite commercial is *Boys Casa*, "Boys talk too much." I have no Internet or cell phone access. I do not know anyone with a Facebook account. I do not play video games.

26's Superhero Commentary.

My superpower is to command trees to fall down. My costume is red and yellow and I clap my hand to drive the spirits away to save people.

Figure 5.39. *Details of Hairstyle*



Note. Observation drawing by subject 26 (left) and photograph of subject 26 (right).

26 is the only female in the Ghanaian cohort to depict herself with a hairstyle, because she is the only one whose hair is not cropped short. What makes her hair braids outstanding is that public schools in Ghana require all children to keep their hair cut short unless they have a medical exemption documented by a physician. However, it is worth noting that 26's mother is a school teacher and may therefore have some influence from within the educational system or the social capital to circumvent the dress code. Drawing from observation, 26 faithfully drew her hairstyle showing the pattern made with her hair, in every braid, and finished with a hair tie on each end. 26 is also wearing earrings, the shape of which she carefully rendered (see Figure 5.39).

The observation drawing created by 26 fits the general trends seen across the mixed self-portraits, with the only exceptions being the omission of eyelids and the exaggerated spacing of the eyes. Searching for possible visual references that may have influenced 26 to draw her eyes spaced apart brought into consideration the wood carvings created at Ahwiaa, the wood working center of Ghana that is located only a mile from the town of Wadie. Figure 5.40 shows a traditional Ashanti warrior mask on display at the

National Museum of Ghana in the capital city of Accra (“Traditional African Masks,” n.d.). There are many shops in Ahwiaa, frequented by tourists, that have a variety of replicated Ashanti warrior masks for sale, and that the subjects have visited on a school trip. And yet, 26 may simply have viewed herself in the mirror, and this observation drawing is her graphic interpretation of her reflection.

Figure 5.40. *Possible Influence on Observation Drawing*



Note. 26’s observation drawing (left), round Ashanti Warrior mask example from National Museum of Ghana- replicas to be found in Ahwiaa, wood carving center of Ghana (right) (“Traditional African Masks,” n.d.).

From the first to the second task, 26’s drawing style changed from mixed to schematic, with the figure in the memory drawing simplified overall, lacking the detail of the observation drawing, yet maintaining the configuration of the facial features. 26 also labeled her memory drawing, “This is me,” one of the few from her group to do so. In her memory/imagination drawing, the figure is drawn in profile, as it is also portrayed in the action/imagination drawing. Although 26 wrote that her costume is red and yellow, she changed the color scheme to orange and blue on the day she drew her superhero in action. Also, there is an ‘S’ on her chest that most likely stands for ‘Super,’ since her first initial

is 'E.' The two figures to the right of the heroine were drawn once again with the eyes widely set, close to the perimeter of the face, and without a nose. We have seen the omission of the nose in schematic drawings by other participants, especially in the action/imagination drawing, perhaps an indication that when the nose poses a challenge to draw and is the least salient facial characteristic, leaving it out altogether becomes a satisfactory solution.

The size ratio between 26's superhero figure and the two figures standing beside her attracts the viewer's attention. The difference in size gives the impression that the superhero is an adult in a caretaker role and the victims are children. Notably, nearly all of the Ghanaian subjects drew their superhero in action considerably larger than the people they are rescuing, more so than the Greek or American cohorts by comparison. Figure 5.41 shows 26 standing beside her mother, who is wearing a dress made of the ankara⁴¹ textile fabric for which Ghana is famous, and the influence of which can be seen in some of the participants' drawings from this cohort. Ankara print clothing can be worn everyday but is usually reserved for special occasions (Jean, 2014). The figures in 26's drawing are carefully dressed, wearing a style and cut of clothing, similar to the clothes 26 and her mother are wearing in the photograph.

⁴¹A batik method of fabric printing that originated in Indonesia using a wax resist technique to create vibrant patterns on cotton cloth. (Jean, 2014).

Figure 5.41. *Details: Photograph of Subject with Her Mother and Action/Imagination Drawing*



Note. Participant 26 and her mother wearing a dress made from Ankara fabric, photographed at their home in Wadie (left), 26's action/imagination drawing (right).

Note that 26's superhero's tricolored cape could represent the Ghanaian flag, which is one of the exercises the students practice in their sketchbooks for Creative Arts class, 26's favorite subject. In the Creative Arts class, students are given assignments to draw and label specific items, such as ten examples of fruits and vegetables, or musical instruments. These drawings are graded on a scale from 1 to 10. Figure 5.42 shows two examples of Ghanaian flag sketches, one with a score of 9.5 and the other a 7. Judging from a comparison of the two drawings, the scoring criteria appear to be based upon including specific, basic information along with creating a naturalistic rendering of the subject.

Figure 5.42. *Examples of Ghanaian Creative Arts Curriculum*



Note. Examples of Creative Arts curriculum from students' sketch books: Ghanaian Flag sketch graded 9.5/10 (left), graded 7/10 (right).

26 declared that her superpower is to command trees to fall down and that she can clap her hands to drive the spirits away to save people. Yet there are no trees in 26's drawing, nor is she clapping her hands. 26 does appear to be holding an object like a stick in her left hand that she is waving toward the house in the background that has flames emanating from the roof shown by a profusion of sketched red lines. The house is drawn with windows attached to the sides of the building in the same manner as the eyes of her self-portrait from observation and full self-portrait are drawn touching the side of the face. Most of the skin areas, such as the faces, neck, hands, arm, feet, were left the white of the paper. The background is filled in with color, but there are no incidentals in the landscape, just the house with the reverse perspective stairs, an experiential approach to rendering depth in space from the perspective of the viewer. The illusion of depth in the picture was created using scale and composition, the house placed in the background and drawn relatively small in size compared to the larger figures in the foreground.

Even though 26 did not illustrate herself clapping her hands, she did explain, "I clap my hand to drive the spirits away to save people." 26 related in her written statement that her family belongs to the Pentecostal, True Disciple church. Pentecostal churches that specialize in spiritual healing use prayer, singing, and clapping to drive away bad

spirits and or counteract curses or other influences of black magic (Ampong, 2018). It is possible that 26's religious instruction is the source for her superhero using hand clapping as a means for saving people.

A majority of the Ghanaian landscapes in the fourth task show nothing surrounding the central area depicted with people and houses; the action happens in the fore and middle ground, a house in the background, but without topographical formations such as hills or mountains shown in the distance. This may be because the Asante fear the wild bush and are concerned with the boundary between the human world and the unknown spirit world. Therefore, most of the drawings are centered on the village without showing the perimeter because that is an intermediary space, with the bush beyond considered dangerous (Marshall, 2007). Another explanation for the pictorial elements included in the fourth task by the Ghanaian cohort may have mostly to do with the instructions. Since the directions asked the participants to depict their superhero self in action saving people in distress, the visual information provided in the drawings is confined specifically to the items mentioned, in a manner similar to the sketches made for their Creative Arts sketchbooks.

Certainly 26 is a dutiful child. She does 30 minutes of homework every day, and house chores as well. She enjoys watching television every day, but does not have Internet or cell phone access, and does not have a Facebook account or play video games. With Creative Arts being her favorite subject in school, a mother who is a teacher, and Bible study at church every day, the main influences on her creative output appear to be her schooling and religious experiences. 26's responses and artwork lean toward a traditional outlook, supported with traditional crafts such as basket weaving, which 26 sees as art there in the village (see Figure 5.43), with media having little effect on her artistic expression.

Figure 5.43. *Traditional Basket Weaving*



Note. Basket weaver with examples of his work in Wadie Adwumakase, Ghana.

Subject 15

Figure 5.44. *Set of Drawings by Subject 15*



Note. Subject 15's observation, memory, memory/imagination, and action/imagination drawings. The speech bubbles read as follows, 15's superhero says, "I've got you, you will never steal again because I caught you and I will tie you to a boulder." and the villain yells, "Aaaaaaaaaa Help." In the action/imagination drawing, the word inscribed on the building to the left Τραπεζα means Bank.

In her written statements, *I5* explained:

I was born in the hospital in Sparta and live in Molaos. My favorite subject in school is music. I think art is important to study because you can make a living from it. If I could study art outside of school I would like to go to England to study to become a singer. If I could learn anything about art I would like to learn how people sing especially how they learn to sing with the notes. I think that it is an important thing for people because with it you live. At home I sing my songs or do acrobatics. My mother is a cook and my father works at a garage. I am most likely to see art at church where I see different Byzantine icons.

I am sensitive, shy, tough, stubborn, adventurous, studious, and social. My strongest characteristic is to speak for everyone. What I like best about myself is my smile, my eyes, and my running. I would like to improve my friendships and to play with friends. I think people see me as a good girl but a little weird. I think my smile and my character are special. My favorite things to do are to sing and dance. My favorite things to eat are fried potatoes with chicken, spaghetti with meat sauce and grated cheese, and pizza. The most important thing to me is my mother, without her I could not live. If I could change one thing in my life I would change my body because I am a little fat. When I grow up I would like to become a singer and dancer.

When I am not in school I go to the playground and play with my friend Tania. I make music and I listen to relaxing and foreign music. I go to Zumba, synchronized, ballet, and break dancing. I play a lot of games and make art. I visit my grandma and my aunt. I watch one or two hours of television a day. My favorite programs are on Star and Antenna (these are channels). My favorite program is “Don’t start whispering” (Greek family comedy). My favorite commercial is that one for the environment because it says to protect the environment. My favorite movie is Titanic because it has romance, action, crying, etc. My favorite song is ‘Ξεχασε με’ Ιωαννα Παπαδακη, ‘Forget Me’ by Joanna Papadakis, it is romantic and on YouTube. I go on the Internet fairly often to listen to music. I don’t go on Facebook very often, just once a day. I have a cell phone in case of an emergency and I can call someone every day. I do not like to play video games with anyone and I play one hour a day. My favorite game is *Minecraft*⁴² because I build houses and go to follow *Fans’ World*.⁴³

⁴²Minecraft is a video game where the player has the ability to create, modify, or destroy their environment. It was created by Swedish developer Markus Persson and originally released by Mojang in 2011 and later purchased by Microsoft in 2014 (“Minecraft,” 2020).

⁴³*EthanGamerTV Fans’ World* is a YouTuber who goes onto players accounts on the console version of Minecraft and plays with the account owner while viewers watch (#EthanGamer, 2019).

I5's Superhero Commentary.

My superpower is I can make the ocean cause a tsunami and drive it to move fast. This costume makes me feel stronger! I did it to save the city and I caught him and I saved it (the city). I live in a cave where no one can find me.

The observation drawing is a combination of naturalistic and schematic elements, with the shape of the face, ears, and lips looking as if she was looking closely in the mirror for guidance, then the eyes more schematic-looking because they were drawn without lids, although the pupils and iris are shown. Notably, the nose is a triangle with two dots for nostrils, like several other drawings by the Greek group; this is a schema that is prevalent among the drawings by this culture. When asked where she is most likely to see art, *I5* tells us in her written statement that she is most likely to see art in church. The church of Agia Paraskevi, the patron saint of Molaos, is located in the town square. Much as images of female saints served as “visual counterparts, as personal intercessors, and as potential surrogates for woman in medieval Byzantium” (Gerstel, 1998), so female icons continue to do so today. It is not uncommon practice for a mother whose child has a health issue to ask for intercession from a patron saint, such as Agia Paraskevi, healer of the blind. With the Greek Orthodox religion an integral part of Greek culture, participant *I5* would certainly see the icon of Agia Paraskevi among many others when she attends church in town, as she also will see Greek Orthodox icons of saints in people’s houses and places of business.

In comparing the icon of Agia Paraskevi with *I5's* observation drawing (see Figure 5.45), the large ovoid eyes with a forward gaze, the shape and gentle arch of the eyebrows, the rounded shape of the face that tapers to the chin, the triangular nose, the shape and size of the lips, the neck widening to rounded shoulders, as well as the placement of the ears in both faces bear a striking similitude. Even the way in which *I5* sketched her hair to cascade from the middle part on top of her head down either side of

her face, curling at the bottom where the hair meets her shoulders, is in much the same fashion as the drapery of the saint's mantle frames Agia Paraskevi's face.

Figure 5.45. *Possible Influences from Traditional Culture and Religion*



Note. Icon of *Agia Paraskevi*, ‘Saint Friday’ (left) (MostlyGreek, n.d.), *15*’s observation drawing (center), outside of *Agia Paraskevi* church in the town square of Molaos during Christmas week (right).

Taking into consideration *15*’s entire set of drawings, *15*’s hair is almost certainly a salient feature, which gets longer with each successive drawing. It is also interesting that *15* tells us she is a little fat, yet she drew herself quite slim, raising the question of whether or not this child is in fact overweight or being unduly critical of herself. *15*’s weight concern may stem from her aspiration to become a singer and dancer, professions that tend to impose certain physical requirements, while also indicating just how dedicated she is to becoming a performer when she grows up. In addition to wearing high heels in every drawing, it is notable that her superhero costume is a variation of the dress she is wearing in her full self-portrait, with the only real change being her dress transforms into a body suit with a cape, not unlike the sort of costume change a famous singer might do during a performance.

Figure 5.46. *Influences from Local Environment*



Note. National Bank of Greece in Molaos (left), 15's action/imagination drawing

The cityscape in 15's action/imagination drawing resembles the center of the town of Molaos, as shown in the photo on the left with the National Bank of Greece building in the background, the ATM machine next to the door. There is a logo in the center of the bank sign as also appears in the drawing after the word 'Τραπεζα'. Above the door in the drawing is what looks like an inside view of the bank with tables and chairs and employees working or waiting on customers. It might also be an illustration of the balcony, as we see it on the second story of the bank building in the photograph. Notice that the curved green lampposts so prominent in the action drawing are accurate depictions of those found in Molaos, just discernible in the photo in Figure 5.46.

Greek mythology enters into the artwork of some of the participants from the Greek cohort. For example, although indirectly, Greek participant 16 refers to Greek mythology, however erroneously, reasoning that since the pantheon of Greek gods are immortal, he claims immortality based upon his status as Norse god of thunder Thor. So too, participant 15 references Greek mythology this time somewhat more directly as she warns the thief she has captured not to steal again; otherwise she will punish him by tying him to a boulder. This is an allusion to the story of Prometheus (Hamilton, 1942), the Titan who stole fire from Hephaistos and Athena to give to man to help mortals survive.

In punishment, Zeus chained Prometheus to a rock where an eagle ate his liver every day because, being immortal, every night it grew back.

15's choice of superpower may also have been prompted by news reports about the largest tsunami in recent years, which struck the west coast of Chile in 2015 with 16 feet waves caused by an earthquake 8.3 in magnitude (BBC, 2015).

Subject 30

Figure 5.47. *Set of Drawings by Subject 30*



Note. Subject 30's observation, memory, memory/imagination, and action/imagination drawings.

In her written statements, 30 explained:

that [my] favorite subject in school is writing. If I could study art outside of school I would learn about collage artists. I do not make art at home. My mom makes watercolors out of old markers. I am likely to see art in a museum.

I play the drums, I have a brother, I am smart, imaginative, and stubborn. I try to get out of everything with logic. If I could improve something I would be nicer to my brother. My favorite thing to do is watch television. There is nothing about my life that I would change. I would like to be a lawyer when I grow up.

When I am not in school I socialize with my friends, play sports, and do chores. I watch television every night, I like TV 14 shows. My favorite program is *The Flash*⁴⁴ because it has a lot of action. I don't like

⁴⁴*The Flash* [TV series], (Nutter & Stanton, 2014–present).

commercials. My favorite movie is *Pitch Perfect*⁴⁵ because it is rated PG13 and it is funny. My favorite song is *Lean On Me*⁴⁶ sung by Billy Withers. I use the Internet to play games, not too often. I don't use social media, have a cell phone or play video games.

30's Superhero Commentary.

My superpower is to make people happy! I make the villains realize what the right thing to do is. I can shoot smiley faces out of my fists. My costume has a computer built into it to determine if the person needs to be happy, really happy, or incredibly happy. I have springs in my shoes to jump extra high. I chose yellow and black as colors because that is the typical color of a smiley face. I live in the sky with the clouds. They can pick me up. I had to save the day because someone was robbing a bank. I saved the day by using a cloud to lift me into the air because the robber is on the roof. I shot a super happy smile out of my fist. When it hit the robber, he dropped the money.

As 30 relates in her commentary, she has the power to shoot smiley faces calibrated with the aid of a computer to properly readjust the happiness of a person according to need, as measured from their present 'level' of happiness. Looking at 30's action/imagination drawing, we can infer that the bank robber will renounce robbing the bank once his happiness level has been restored by the 'super happy' charged smiley face being shot at him by our heroine, 'Dr. Smiles.' 30 recorded that she designed her costume with the colors yellow and black based upon the pop iconic 'smiley face,' an image first created by Harvey Ball in 1963 (Stamp, 2013) and then later adapted to emoji ideographs such as are used with various mobile devices to communicate mood. There is an emblematic smiley face on the front of 30's costume top, she is standing on a cloud that has a happy face, and there is a smiley face in midair shown traveling toward the criminal emphasized by the inclusion of three parallel lines drawn on either side of the icon. A relationship between drawings in this study and images sourced from digital communication and social media will be considered in section two of this chapter.

⁴⁵*Pitch Perfect* [Film] (Moore, 2012).

⁴⁶Withers, 1972.

Figure 5.48. *Examples of Smiley Faces*



Note. Original Harvey Ball Smiley Face, smiley face emoji, happy face slightly smiling emoji (Stamp, 2013).

There is an interesting approach to stopping crime in this scenario that advocates a form of psychological rehabilitation founded on the theory that someone can be diverted from committing a crime if their emotional life is improved. As 30 wrote, “I make the villains realize what the right thing to do is.” However, the improvement in disposition is not self-motivated but instead imposed using information gathered through artificial intelligence, a computer that is part of 30’s costume. The idea that any entity or institution might have the power to alter an autonomous individual’s emotional outlook based upon ambiguous standards of happiness could be viewed as a bit dystopian. Yet, from the perspective of an American fifth grader, the state of “happy, really happy, or incredibly happy” may be believed to be the ultimate benchmark for a successful life. Especially given the widespread use of emojis to convey our emotional state to one another at any given moment through digitalized messages or to express our opinion about just about anything that has been posted electronically.

This may also be a reflection of a national cultural trend in the United States to create one’s own happiness by taking care of oneself, a message emphasized through many avenues of daily exposure to media communication, including: advertisements, magazines, celebrity endorsements, movies, television talk shows, reality shows, infomercials, *YouTube* channels, websites, blogs, all delivering the message that success is measured in happiness, and happiness can be manufactured by fixing yourself with the

latest therapy, app, diet, spa, and so on. Indeed, with *30* riding a cloud labeled “Dr. Smiles” comes the likely association with many televised health and wellness talk shows featuring health care professionals, such as *The Doctors*,⁴⁷ *The Dr. Oz Show*,⁴⁸ and *Dr. Phil*.⁴⁹ Also, *30* reported that although she does not use social media, have a cell phone, or play video games, she watches television every night.

30 wrote that she would like to become a lawyer when she grows up, a profession that aligns with her superhero objective to make villains become morally virtuous by “making them realize what the right thing is to do.” Not only an underlying theme of the superhero genre, law and a system of justice are considered essential to forming and maintaining a civilization and with the development of democracy. Western architectural styles used to convey the power and longevity of institutions such as courts, universities, and banks are based on ancient Greek and Roman structures. The bank building in *30*’s action drawing has a pediment, columns, and stairs descending, however in inverted perspective. The photo in the center of Figure 5.49 shows the façade of a bank in *30*’s shopping district that is a simplified version of Greek revival architecture, an example of which is pictured to the right in Figure 5.49. As many of the examples show, the participants incorporate images from their surrounding environment, especially those of particular interest or that represent specific elements that are key to the illustration, such as the bank building being robbed.

⁴⁷Stork & Ordon (2008–present).

⁴⁸Radar & Chiaro (2009–present).

⁴⁹Pennington & McGraw (2002–present).

Figure 5.49. *Possible Influence on 48's Action/Imagination Drawing from the Environment*



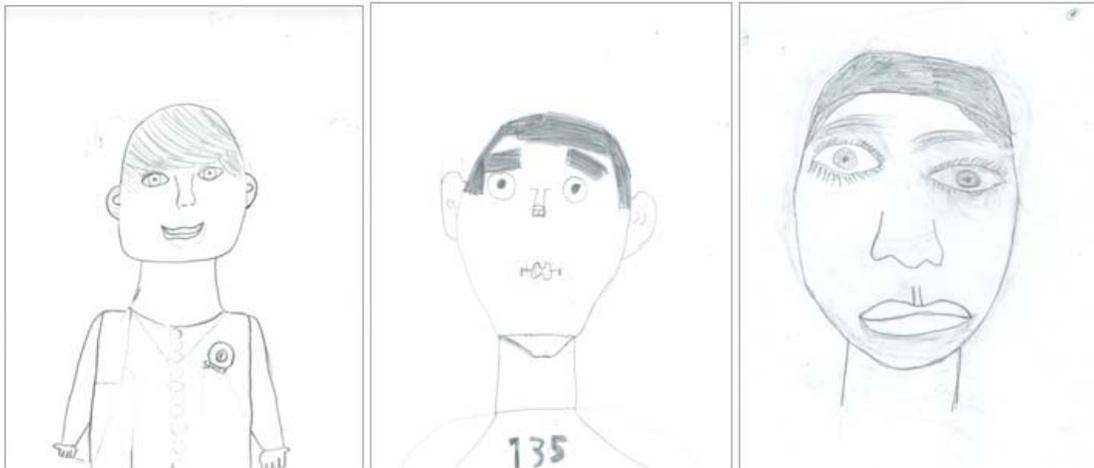
Note. Bank building from 30's superhero in action drawing (left), the M&T Bank, Mount Kisco, NY located in 30's neighborhood (center), Otsego Bank, Cooperstown, NY (right) as an example of Greek revival architecture.

In addition, the quotation over her head, "I'm everywhere, and nowhere!" is odd and original among the drawings. As a riddle, the answer to this phrase is nothing, or emptiness. There is also a book with this title, *I'm Everywhere and Nowhere. And I Own Nothing and Everything* (Girard, 2016), which was self-published by the author using a service owned by Amazon. It seems a fitting motto for a superhero whose power is to fill a person's happiness deficit by shooting them with a smiley face; "I'm everywhere and nowhere" with the ability to not only make someone happier, but in the case of the thief, will correct criminal behavior by involuntarily engineering emotional balance.

Drawings Exemplifying Varied Styles

One of the criteria in choosing this as a group, having just discussed the mixed observation/schematic profile, is that each one changes style on a different task. A closer look and comparison of the images and their content might reveal influences on style changes and perhaps patterns. The drawings from observation by the inconsistent style group are widely varied (see Figure 5.50).

Figure 5.50. *Varied Styles Group Observation Drawings*



Note. Observation drawings by subjects from the Varied Styles group: 13 male from New York, 56 male from Greece, 64 female from Ghana.

Subject 13

Figure 5.51. *Set of Drawings by Subject 13*



Note. Subject 13's observation, memory, memory/imagination, and action/imagination drawings.

In his written statements, 13 explained:

Literacy is my favorite subject in school. I don't think that art is an important subject for study because I don't see myself becoming an artist. I would not like to study art outside of school because art isn't one of my hobbies. If I could learn anything about art I would learn how to draw more realistically. I think a work of art is a depiction of someone's thoughts on a piece of paper. I don't make art at home. No one in my family makes art. I am most likely to see works of art in a museum such as paintings, sculptures, objects.

I am awesome: imaginative, outgoing, adventurous, religious, impulsive, funny, and social. My most outstanding characteristic is my charisma and my hair. Anger is a weakness that I would like to improve. Other people would say that I am crazy and funny. My favorite things to do are skateboard, basketball, and football. Ramen noodles are my favorite things to eat. I don't know what I want to be when I grow up.

I watch television every night. My favorite television programs are sports because of the suspense and hype. My favorite commercial is "The Hoopers" for State Farm Insurance Company because it is funny to see NBA players in dresses. My favorite movie is *Lone Survivor*⁵⁰ because of the action and sadness. My favorite song is *Pop Style* by Drake.⁵¹ I use the Internet to watch YouTube every day. I use my cell phone for the Internet and texting every day. I play video games occasionally. My favorite video game is Madden NFL Mobile.⁵²

13's Superhero Commentary.

My power is shrinking. I chose this costume because it looks cool. Also the mask helps me breath. It reflects my powers because it makes me shrink. He lives underground because he is small.

13's drawings from observation and memory were scored mixed style (see Figure 5.51). 13 drew his self-portrait wearing a shirt carefully drawn with buttons down the front and a linear pattern, possibly stitching on the seams, and then erased the details and drew instead the Stüssy⁵³ eight ball logo on the upper right hand side of his shirt. The choice of label is compelling because the Stüssy company has been branded to represent a laid-back, free-spirited persona. Erasing and redrawing of the Stüssy logo gives the impression that appearance, and particularly brand name clothing, is a defining component of 13's personal identity, so much so that he redrew his shirt from memory

⁵⁰*Survivor* is a 2013 drama/thriller starring Mark Wahlberg (Berg, 2013).

⁵¹Aubrey Drake Graham (born October 24, 1986) is a Canadian rapper, singer, songwriter, producer, actor, and businessman ("Drake," 2020).

⁵²Madden NFL Mobile is an American football mobile sports game based on the National Football League, developed and published by Electronic Arts ("Madden NFL Mobile," 2020).

⁵³Stüssy is an American clothing brand that started in the early 1980s as surfwear, but it has largely been adopted by the streetwear and hip-hop scenes ("Stussy," 2020).

rather than observation. This also is an indication of the power of advertising and the fashion industry's influence on consumers who shop designers with whose marketing ethos they self-identify.

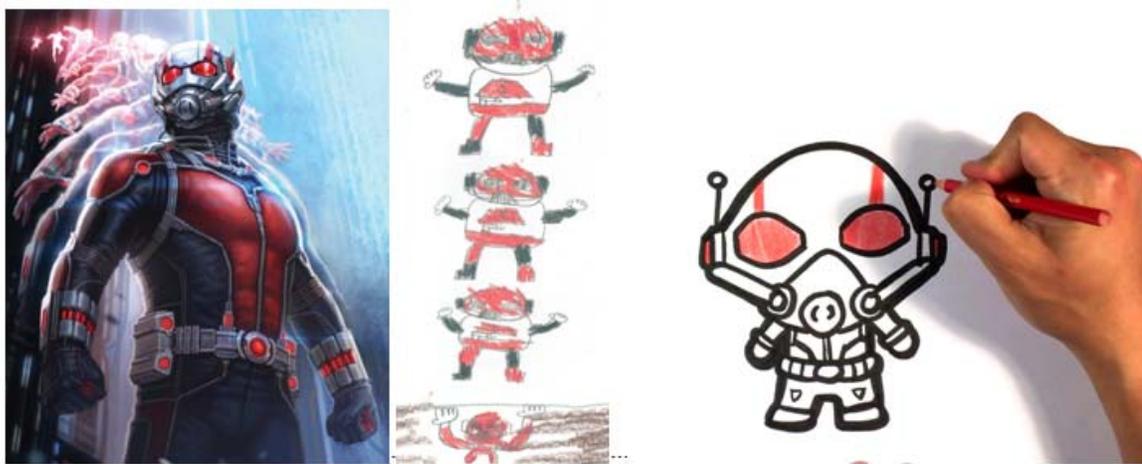
Looking closely at *I3*'s full self-portrait, he first drew a schematic self that is virtually a stick figure above his memory drawing and crossed it out with a diagonal line through the figure. Then he drew his full self-portrait below in a mixed style. Working from observation and memory, *I3* produced mixed style drawings.

Yet *I3*'s style profile changes from mixed to schematic in the imagination drawing, where he switches from more naturalistic depiction to schemas using simplified shapes. Like many of the subjects from his cohort, the opportunity to draw from imagination seems to be the catalyst that allows for the media images to enter into the drawings. Although *I3* does not name *Antman* (2015)⁵⁴ as his favorite movie, like many of the other participants in the study he co-opted a known superhero's powers for his own, thus *I3*'s superhero shrinks in a manner very similar to the superhero Antman.⁵⁵ The helmet worn by Antman facilitates communication with ants and protects his skull and brain as he changes size. The Antman helmet, as a salient feature of the costume, is featured in online tutorials for drawing such as the Kawaii Antman character shown in Figure 5.52. Kawaii, the culture of cuteness from Japan, is an aesthetic that can be applied to any item, human and nonhuman ("kawaii," 2020).

⁵⁴Reed (2015).

⁵⁵Ant-man is a Marvel comic character superhero. In the Marvel comic, biophysicist Henry Pym discovers a chemical substance that alters his size so that he can avenge the murder of his wife. His superhero persona, Antman, teams up with his new girlfriend, the Wasp, and together they form the Avengers ("Ant-man," 2020).

Figure 5.52. Possible Influences on Drawing from Media



Note. Marvel comic Ant-man shrinking (left), detail from *I3*'s action/imagination drawing (center) (Britannica, n.d.), still from how to draw Kawaii Ant-man YouTube video (right) EasyPicturesToDraw (2018, July 6).

Notably, *I3*'s action/imagination drawing does not show anyone being rescued but rather centers upon the shrinking superhero. It seems that the challenge of repeatedly drawing the same character while scaling the size of the figure down was particularly enjoyable and satisfying for this participant, so much so that the activity usurped the direction to show the superhero in the act of saving someone. *I3* reported that he uses the Internet to watch YouTube every day, where he follows tutorials such as the Antman drawing how-to in his spare time outside of school, although he does not think that art is worth studying in school unless one intends to pursue a career in art.

Subject 56Figure 5.53. *Set of Drawings by Subject 56*

Note. Subject 56's observation, memory, memory/imagination, and action/imagination drawings. In the speech bubbles in 56's action drawing, the child hanging from the helicopter shouts, "help!" Superman responds, "I will shoot a laser and grab you." The robot says, "no!"

In his written statements 56 explained:

My favorite subject in school is geography. Art is an important subject for study. I would not like to study art outside of school. I think a work of art is a painting. I do not make art at home. I see art in the museum.

I am a tough, hardworking, quiet child. My strongest characteristic is that I am smart. I like everything about myself. I would like to learn more things. I think people see me as a good child. My favorite thing to do is walk. I like all foods. My favorite thing are my lessons. I would like to become a firefighter when I grow up.

I watch television on Saturdays. I like to watch sports. My favorite movie is *Despicable Me*. My favorite song is "The Most Beautiful In Greece" by Konstantinos Koufos. I don't use the Internet or Facebook. I have a cell phone. I like to play video games with my brother. I like all video games.

56's Superhero Commentary.

Superman flies, shoots lasers from his eyes and cold air. I chose this costume because the blue matches the sky. I will save the child with lasers and the robot will not be able to get him. Superman lives in a hideaway in the city, in human form because he goes to work.

In his observation drawing, 56's process for rendering his self-portrait seems to be a search for simple shapes, like common denominators, to represent the bodily components (see Figure 5.53). As he drew, 56 modified contours, struggle evident in erasing and redrawing parts, such as the chin, which is oddly attached above the neck like the flap of an envelope, the shoulders, first drawn curved and then redrawn sloping downwards, features such as the rectangular nose with a square tip to which he added circles for nostrils, and the mouth, resolved in a clamshell-like shape. Moving from observation to memory drawing, 56 embraces a round head with large-pupiled eyes, switches to a triangle for the nose and wavy enclosure for the mouth, generally showing greater confidence in the manner by which the lines were executed here and in the rest of the drawings, like most of the males in the Greek cohort who drew schematically with confidence.

Figure 5.54. Comparison of a Video Game Still with 56's Drawing



Note. Clip from *Superman Returns* video game showing Superman vs. Metallo (left) and 56's action/imagination drawing (right).

Participant 56's superhero is modeled on Superman, he did not really create his own superhero (see Figure 5.54). The drawings are schematic until the mixed action/imagination drawing. In the case of 56, it is possible that knowledge/understanding was acquired through the drawing activities, building from challenge to challenge to inform the drawing of himself as a superhero in action. However, the rest of the scene is depicted

predominantly using schematics, most likely due to the challenge of the task to depict an entire scene.

The space left uncolored in the middle of the action drawing is intriguing because the uniformity and positioning of the space seems moreso to represent air in the middle ground shared between the Superman and robot figures, than to have been left unfinished due to lack of time. The space at the bottom of the page also supports the spaces left white as a decision rather than an accident of circumstance, drawn with a scallop-like edge suggesting a scroll or edge of a cloud, which lends to the image the aspect of the characters being on a stage.

Figure 5.55. *Possible Video Game Graphics Influence on 56's Action/Imagination Drawing*



Note. Screen shot from the video game *Injustice 2: Gods Among Us* showing Superman vs. Brainiac (thehmp1, 2017).

Given that 56 reported that he likes all video games and plays with his brother, the likelihood that he plays Superman video games is great. The *Superman Returns* video game made for the Xbox 360 as well as the PlayStation 2 and Nintendo DS (“*Superman Returns* [video game],” 2020) has a robot-like character named *Metallo*, who is one of the villains in the game (see Figure 5.55). There is also the *Injustice: Gods Among Us* video

game with Superman facing off against his nemesis *Brainiac*, an alien cyborg (“Injustice Gods Among Us,” 2020). As with many of the rescue scenes depicted by the subjects in this study, to have the superhero play a guardianship role required that 56 illustrate the rescue of a child rather than an adult.

Subject 64

Figure 5.56. *Set of Drawings by Subject 64*



Note. Subject 64’s observation, memory, memory/imagination, and action/imagination drawings.

In her written statements 64 explained:

I was born in Wadie where I live with my parents. I have four siblings and I am number three. We are Methodist. My father is an electrician and my mother is a trader. My favorite subject in school is RME. Art is an important subject to me. I would like to learn weaving. I think a work of art is when we draw for pleasure. At home I draw pictures of someone selling in the market. No one in my family makes art. The only art I am likely to see is someone in the village weaving baskets.

I am dark in complexion. The game I like the best is Ampe and the food I like best is rice and stew. I like laughing and fighting. I am outgoing, tough, and I am a follower. I like being with people. My strongest characteristic is that I am respectful. One thing that I would like to improve about myself is that I should fight less. I think other people see me as a good girl. The most important thing to me is learning. One thing I would like to change is my anger. I would like to become a nurse when I grow up.

When I am not in school I like to play Ampe with my friends. I like to listen to gospel music and dance to Akayida. I go to church and read the

Bible every day. I sweep and fetch water at home. I do not have a job. I watch television every day. My favorite programs are “Heartbreak Hotel” and “Trapped in a Cage.”⁵⁶ My favorite commercial is for *Tasty Tom* tomato paste. I do not have Internet or cell phone access. I do not play video games.

64’s Superhero Commentary.

My superpower is to let fruit fall from the skies. My costume is a cape. I save people.

A female from Ghana, subject 64’s observation drawing is outstanding in the sensitive use of contour line to describe the edges of each facial feature (see Figure 5.56). The intensity of the gaze in 64’s mixed style observation drawing becomes an indication of the effort with which this participant translated the visual information before her in the mirror onto her paper once compared with her drawing from memory. In her memory drawing, labeled “me,” 64’s facial depiction with a round head, dots for eyes, and lines for eyebrows and mouth is schematic compared to the rest of her body which, is drawn more naturalistically and rendering of long flowing hair curled at the ends and the threads of the woven fabric of her skirt. After the observation drawing, 64’s depiction of her face in the rest of her drawings is a bit perplexing when juxtaposed with the more naturalistic posture of the body, barefoot or shod, and the details included in the rest of the image. In fact, 64’s imagination drawing was scored schematic. The face in the imagination drawing labeled “my suppa-hero” is most readily explained as an interpretation of a superhero mask, with the flat top an attempt to make the head look three-dimensional. Moving from the imagination to the action-imagination, 64 returned to a more mixed style once again, indicating an adjustment to the change in drawing mode. Unlike most of her cohort, 64 barely used profile in her drawings.

64 is one of the five Ghanaian participants who declared RME their favorite subject in school and chose superpowers that provide people with food. In her action-

⁵⁶*Heartbreak Hotel* and *Trapped in a Cage* are Ghanaian television series produced in 2013 by TV3 (Frimpong, 2013).

imagination drawing, 64 shows more details of the village than most of the rest of her cohort. Perhaps this is a result of 64 having practiced drawing scenes from the market place in her free time at home. It may also stem from a heightened sense of her environment from doing chores such as fetching water and an awareness of the agricultural labors in the surrounding fields. Or it simply may indicate that 64 pays attention to what is happening around her, such as noticing the man who weaves Kente cloth in the village, as she relates in her writing. With the two trees in the upper right-hand corner, possibly banana tree groves that begin on the edge of town, 64's is the only action drawing to show a landscape in the background. Other details of village life include laundry hanging to dry and children playing Ampe and jumping rope. Inverted perspective is used for the stairs leading to the door of the house. The corrugated tin roof of the house is decorated with some artistic license, the colors of the rainbow. Color is also used to differentiate grassy areas from raw earth, a dirt road, and pathways through town (see Figure 5.57).

Figure 5.57. *Examples of Influences from 64's Environment*



Note. 64's action imagination drawing (left), banana trees on edge of town (right).

Figure 5.57 (continued)



Note. Road through town (left), courtyard of house with laundry (right).

Section I Summary

Although much of the interview data do not relate directly to the drawings, what participants chose to say about themselves nevertheless enlightened what we know about the child's life; their thinking, opinions, and interests, aspects of which enter into their image making. In many cases, appropriated images were synthesized into the drawings as vehicles to convey meaning, borrowed from the original context and inserted into the subject's own narrative. In other cases, salient visual references of popular culture consciously filtered into a rendering because it was admired and had become part of the subjects' artistic repertoire. In other cases, an image was inserted because it was familiar and fit the space that needed to be filled.

Clearly the drawings reflect the subjects' natural environment, most notably in the action/imagination drawings by the Ghanaian group, whereas the Greek and New York cohorts tended to adapt media generated environments from movies and video games. The New York and Greek cohorts were the most influenced by media images, and often included references from media images that they did not write about. Other notable influences came from popular music, school curriculum, religious activities, and peers.

Moving forward, the next section focuses on the results as reflected differently by the three cohorts and their sense of agency in the world.

Section II. Results Reflected Across Cultures

Through the lens of the style profiles, the first section of Chapter V examined representative drawings from each culture in the context of the results for detail, content (subject matter), and media, as supported by the written commentaries from each participant. Focused on the influences that emerged in an individual's set of self-portraits, the first part of this discussion considered how images from the subjects' environment, traditional culture, and media possibly came to be integrated into their autobiographical creative output.

This section provides an analysis of how the same results for style, detail, content, and media are cast differently across the three cultures. In addition to the drawings and autobiographical information provided by the participants, accounts from the teachers and parents in the form of written questionnaires and personal communications contribute information about curriculum, pedagogy, extracurricular activities, and homelife to help understand the differences that emerged. This section also considers ways in which the content of the drawings might convey a subject's sense of agency as well as influences from the broader social environment, specifically school, material, and folk culture, as reflected across the three cultures.

Section II is organized by country: United States, Greece, Ghana. The discussion of each country begins with a description of the art teacher, including her educational background, teaching philosophy, and reflection on her students, followed by written commentary from parents leading into the discussion of style, detail, content, and media.

Overall

It has been established that the American drawings were the most schematic, the Greeks were more evenly divided between schematic and mixed, and the Ghanaians mostly mixed. However, the schematic American drawings were made with the greatest assurance by the girls, the Greek boys drew schematically and hesitantly while the girls were mixed and assured, whereas the Ghanaian drawings were the most hesitant at first, especially those made by the girls, then gained in assurance across the tasks as the Ghanaians seemed to self-correct through practice. The Americans and Greeks included details in all of their drawings, yet details were initially generally absent in the Ghanaian drawings, then appeared fully articulated in the imagination drawings. While comparing a collection of drawings by Qatari, Taiwanese, Malaysian, and American children, Brent Wilson (2008) commented, “The American drawings lack consistency—they have more variations than the other samples. It’s almost as if the kids’ drawings reflect the diversity of American culture” (p. 258). As I enter into this discussion of results across cultures, I wish to point out the implicit bias in the previous statement as caveat for using caution in locating the basis for apparent trends or homogeneity. The objective here is not comparison but of inquiry, noticing, questioning, and learning from emergent pathways and connections between what has been drawn, written, and shared. Please note as well, it is essential to acknowledge the implications of Western modes of thinking and expectations that persist in educational settings in the United States, Greece, and Ghana and continue to pervade drawing pedagogy. Indeed, the Americans’ imagination drawings appeared to be the most varied in theme and layout design, the Greeks used the greatest amount of details and most often depicted the villain captured directly, and the Ghanaians drew imagination drawings that mostly reflected their environment close to home. As the first section emphasized details and content as functions of style, this second section fleshes out the degree to which influences, especially media, are a function of culture.

The Americans

*Art Teacher*⁵⁷

The American art teacher grew up on the eastern end of Long Island, NY, in a middle class neighborhood of Sag Harbor. She earned her BA in American Studies from the University of Colorado, Boulder, CO and a master's degree in Art Education from the School of Visual Arts, Manhattan, NY. She has been teaching art for over ten years. She also has studied mosaic making at the Orsoni Tile Factory in Venice, Italy. When asked about her art curriculum and her fifth grade students' art-making experiences, the American art teacher explained:

The students in the study worked in a TAB Teaching for Artistic Behavior, student choice based curriculum, which focused on skill builder activities in drawing including:

- exposure to and proficiency in working with drawing materials including: pencils, charcoal, colored pencil, marker, chalk and oil pastels, erasure drawings, ebony pencils, crayons.
- contour line drawings
- erasure drawings, exploring negative space
- using value to create highlight and shadow to add depth and dimension
- color blending and theory
- portraiture
- figure drawing

Students explored ideas that were of interest to them personally. I tried to balance drawing from observation and imagination. Often students worked from observation when drawing more representational work. When they explored more expressive and conceptual ideas they drew from memory and imagination.

In addition to the drawing they do with me in the art room, I believe they do use drawing in other classes, as a means of conveying information and their learning. There is also a visiting artist that they work with.

Outside of school, some students participate in the Boys and Girls Club where they enjoy drawing. Other students have taken art courses through the

⁵⁷The teachers in this study are ordinary teachers in ordinary classrooms. They were virtually non-selected, as happenstance they factored in by location of school and country.

Katonah Arts Center and art programs at summer camps. The school also has after school groups, sometimes focused on the arts that students may take.

Parents

The American parents reported a range of religious and educational backgrounds and occupations, including homemaker and nurse. More than two-thirds were born in the United States, with immigrants mostly from Guatemala. Most considered art worth studying in school because it develops imagination and creative expression, a few did not, and some considered art as a possible occupation for their child, such as fashion design. Many described religion to be an important aspect of their childhood for moral education and showing kindness to others. A parent reported that her son draws characters from his favorite video game at home. All of the homes have at least one television; many have three. American parents reported that the greatest influences on their children are schooling, friends, and media: including television, movies, magazines, advertising, radio, email, Facebook, video games, cell phones, and texting. Interestingly, parents viewed media influences both positively for finding out “what is trending and new” and negatively as a source of “bad ideas.”

Style

The curriculum described by the American art teacher has a focus on teaching drawing skills and working from observation, memory, and imagination, making the results for the Americans all the more intriguing. The majority of the Americans—predominantly the females—switched from mixed to schematic drawing when the task changed from an observation drawing to a memory drawing. Drawing from memory may have not been as solidly developed as drawing from observation and imagination. Indeed, the picture we visualize in our mind may seem very clear, yet when we attempt to concretize it on paper, our grasp of the image turns out to be rather tenuous. Another catalyst for the switch from mixed to schematic may also be that drawing schematically

allowed for the participants to include their cherished media imagery in their drawings that are of great personal interest rather than attempt the challenge of producing more naturalistic drawings.

Detail

The categories of details scored for included: cultural, clothing, facial, guidelines, hairstyle, insignia, accessory, label, other, speech, and symbolic. Generally, the Americans used less details when they switched from mixed to schematic drawing from the observation to memory drawing. However, when the Americans created the imagination drawing, the details reappeared. The Americans showed confidence making schematic drawings largely using facial and symbolic details that included speech bubbles and text with conventions and labels. Figure 5.58 shows two examples of schematic drawings using facial and symbolic details and contextual cues to drive the narrative that are typical of this group. These drawings scored high for assurance while lacking proportion overall, with a tendency toward large, round heads with small bodies. The Americans' desire to use media derived imagery is at odds with this group's acquired drawing skills, as Paul Duncum (2014) has stated: "Popular visual imagery offers youth rich resources from which to cobble reference points for living," yet students lack the skills required to "better express themselves in the styles and media of their time" (p. 304).

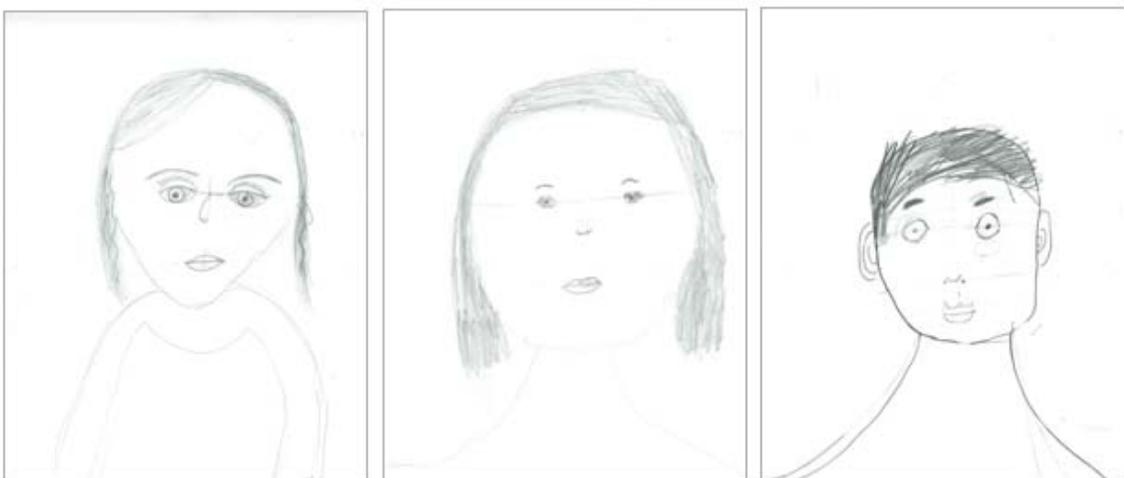
Figure 5.58. *Typical Details in American Drawings*



Note. Examples of details typical of American drawings (8 left, 17 right): schematic facial features, exaggerated proportions, conventional symbols, speech bubbles, labeling.

Also, seven Americans used gridlines for the observation drawing (see Figure 5.59), which may indicate this technique was either a part of their portraiture course of study in school or possibly learned from online tutorials. Regardless, although drawing from observation is clearly part of their art-making experience, there is struggle evident in the drawings with the placement of facial features and use of line to describe contour.

Figure 5.59. *American Drawings Using Guidelines for Facial Properties*



Note. Examples of observation drawings employing guidelines as a strategy: 17, 20, 68.

Content: Sense of Agency

The content of the American drawings revealed a great deal about individual interests, which gave us an autobiographical profile of the study subjects discussed in Section 1. The superpowers and means of rescue chosen by the Americans give us quite a remarkable understanding of their sense of agency in the world and a window onto specific cultural influences.

The incidence of Americans who invented a psychological form of intervention for saving a victim may be a reflection of recent New York State educational initiatives for social-emotional well-being and restorative justice that have been introduced into school curricula. The trend for using therapy to save someone from emotional trauma gives us a sense of methods many of these 5th graders feel they might use to resolve conflict rather than physical force or violence, the very means by which most superheroes operate.

Many Americans revealed personal traits while expressing a sense of agency much like the action in a video game or cartoon. For example, 47 not only describes himself as funny, he prides himself on his humor and believes that others see him as humorous, too. His superpower is bouncing on people. He disabled the bomb by eating it, then arrested the robbers who robbed the donut store. 47 even wrote his own theme song, "Bounce man is in town, he's the fattest guy around." However, for all of the detail, imagination, and self-awareness apparent in 47's verbal description of his superhero in action, the drawings themselves use schematic stick figures, rely on labeling to identify the characters, and are composed like a platform/shooter video game in which the player, in this case 'Bounce Man,' interacts with the platforms by bouncing his way across the scene aided by a helicopter that shoots the 'bad' guys (see Figure 5.60). We see the most violence by far depicted in the American drawings, with seven of the action/imagination drawings scored for violence.

Figure 5.60. *Examples of Media Influences on American Action/Imagination Drawings*



Note. Action/imagination drawing by 47 (left) and 36 (right).

Media

In general, American media usage is the highest, with daily TV viewing and Internet use foremost, then video games played on a weekly basis and cell phones used to contact friends. In addition, the style profile of mixed observation/schematic, which drove the statistical switch from mixed to schematic, used media the most. As discussed in the first section, the media imagery integrated into the drawings by the New York cohort can be traced back to a source or linked to a similar model. Many of the environments portrayed in the action/imagination drawings resemble the layout of a video game with the artist as a player. Moreover, the video game format most conducive to a baseline drawing⁵⁸ is an action game, where the player is in control of and at the center of the action (Vince, 2018), with the platform/shooter games injected with violence. Other media formats as well have been adopted into the drawings, such as 36's

⁵⁸Baseline refers to the line drawn horizontally across, usually toward the bottom of the paper upon which all objects are placed.

action/imagination drawing composed in a comic book layout using three panels (see Figure 5.60). Certainly, American boys as much as the girls are integrating media images into their drawings.

The Greeks

Art Teacher

The art teacher at the elementary school in Molaos was raised Orthodox Christian in a middle income family in Athens, Greece. She has a Fine Arts degree in painting from Thessaloniki and Athens for sculpture. She has been teaching for 20 years and also works as an iconographer. In her written responses she commented:

I consider a work of art to be whatever someone wants to express such as an idea, thought, or fact visually. I do not make art, nor does anyone in my family. I rarely see art in my daily life, except in documentaries on television and once in a while visiting museums and galleries. In addition, my students do not see art in their daily lives except once in a while on a compulsory school visit.

I would describe the Greek educational system as insufficient, malfunctioning. The strength of the educational system particularly at the elementary level is the human dynamic. One of the weaknesses of the educational system is its lack of rules. The area that needs the greatest improvement is modernization. The quality and availability of educational materials and resources are insufficient. The only technology here at the school for educational purposes are computers. Her behavioral management system in the classroom is based on group tasks.

In my opinion all of these influences that the students encounter in school and in their daily lives might shape their sense of self and identity: schooling, cultural traditions, religious beliefs, peers/ friends, youth culture, media: television, movies, magazines, advertising, social media: email, Facebook, Twitter, Skype, Whatsapp, video games, cell phone use and texting. Furthermore, all of these influences might play a role in a child's artistic expression, artwork and creative thinking. My students can be influenced to a large degree, positively and negatively and that is imprinted on their artwork and manner in which they act.

As far as extracurricular activities, the students usually watch vain television series or violent movies. They transfer the violence to their artwork. A large amount of them play athletic, musical and warlike video

games. It definitely influences them. Most of the students have Internet access for information and games. In their free time students: listen to music, dance, make art, sports, family outings, vacation, visit family/ friends, homework, computer, reading for pleasure, church or other religious based activities, holiday celebrations (religious, traditional, national), socializing with friends, television, work, chores.

When asked about her art curriculum and her fifth grade students' art-making experiences, the Greek art teacher explained:

The work I assign the children at the beginning of the school year are color exercises (warm-cool, tonal values) and sketching exercises (portraiture, still life). We work with themes such as fantasy for free choice theme occasionally.

The majority of time during the school year was dedicated to papier-mâché constructions with the theme fantasy animals (individual assignment) and the next year I got involved with the 'robot' made from cardboard and recycled materials (group project 3-5 students).

The connection between art and the other subjects is not judged satisfactorily.

The students' experience with art outside of school is connected with an artistic club (luxurious) that my husband and I keep and a center for creative pastime (K.Δ.A.Π.).

She also commented about the cultural relevance of figurative art in Greece:

There is a strong figurative tradition in Greek art. The human form/body is realistically represented in art and in various art forms in popular culture in Greece. The representation of the human form is of particular importance in traditional Greek artistic expression because it expresses the morals, customs, culture, and way of life.

Parents

Generally, the Greek parents reported that religion is part of daily life, with a calendar of religious holidays they observe and celebrate. One parent commented that "religion was a positive influence in my life because it made me a good person." Parents also were of the opinion that art is an important subject to study because "it helps us to express our feelings, it calms us and gives us information for every mood." Another parent describes a work of art through the effect it has, declaring, "It is something that

amazes me, makes me contemplate, to cry and to laugh.” However, parents explained that they were not likely to see art exhibits except on rare trips but were much more likely to attend local theater performances and concert events.

Style

The Greek males drew the most schematic observation drawings, and then males and females switched from mixed to schematic from the observation to memory drawing. In addition the Greeks scored high for hesitant when drawing schematically, tying lack of confidence to schematics for the Greeks. Also the Greek females scored high for assuredness when using a mixed style of drawing, a departure from the American females, who scored high for drawing schematically with confidence. This is a clear indication that there are different kinds of schematic drawing from culture to culture and different reasons for using schematics. For the American girls, schemas are an accepted and practiced form of expression, whereas the Greeks appear to be lacking experience or approaching a threshold in development. There may be as well a lack of interest in developing drawing skills because of a lack of value placed on the visual arts by the society itself. “The value and investment a society places on skill and talent in a given domain also can determine talent development (Tannenbaum, 1986)” (Milbrath et al., 2015, p. 898).

Detail

The Greek subjects used the most details in their observation drawings: clothing, facial, hairstyle, and insignias as distinguishing characteristics. When the Greeks switched from mixed to schematic from the observation to memory drawing, they continued to use detail when they drew schematically, unlike the Americans. Specifically, as many Greeks as Americans drew round heads (50%); however, many Greeks drew a triangular nose (33%), and the rectangular nose (20%) appeared only in the Greek drawings.

From one set of drawings to the next, participants integrated images with which they have daily interaction into their self-portraits. It is therefore likely that religious icons that the Greek children see on a daily basis, which can be described as stylized depictions of the human figure, seen not just in church but on the walls in local businesses, institutions, and homes alike, had an influence on their renderings of themselves and may be the source of specific details, such as triangular and rectangular noses.

As the Greek art teacher qualified that she is an iconographer but does not make art, the subjects in this study may well view religious icons primarily in a functional capacity as opposed to works of art displayed in exhibitions. Also, Greek Orthodox iconography is a codified visual language. For instance, color is symbolic, such as the red and blue robes, the color blue symbolizing heaven and red the earthly realm. It may not be too much of a stretch to suggest that the Greek children sense an association if not make the outright connection with some of the most archetypal superheroes in comics: Superman, Wonder Woman, Thor, Spider-Man, and Captain America, wearing costumes of primarily red and blue, with yellow accents (see Figure 5.61).

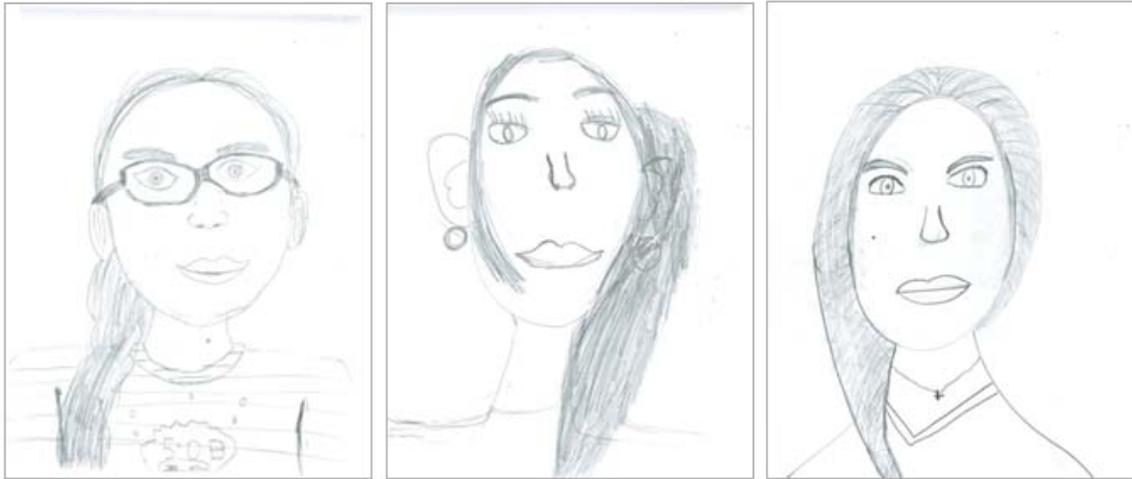
Figure 5.61. *Comparison of Color as Visual Symbolism*



Note. Archangel Michael, Greek icon, XIV century (left) (Orthodox Christianity, n.d.), Superman Marvel comic character (right) (Clip Art Library, n.d.).

Certain details also appear to be shared among peer groups, especially fashion trends, such as Greek females drawing themselves from observation with their hair gathered over one shoulder, as in Figure 5.62, a style that was not seen in the other cultures.

Figure 5.62. *Fashion Influences in Greek Observation Drawings*



Note. Observation drawings by 9, 41, 45, all female subjects from Greece, posed with hair over one shoulder. The Greeks scored for the most details in their observation drawings.

Another example of a specific type of detail transmitting among members of a group can be seen in Figure 5.63, showing trees from the action/imagination drawings of three Greek subjects that not only resemble one another but share a vector tree diagram probably discovered on the Internet as a source. The Greek girls in particular reported using the Internet for research and information.

In their study of Dutch children's use of tree schemata, Wilson and Ligvoet (1992) wrote,

Gombrich, perhaps more than any other person, has shown that it is not mere observation of the objects of their environment through which artists create the graphic schemata that represent their worlds. Rather, they borrow from culturally available schemata or patterns of graphic conventions which they wish to represent. (p. 75)

Figure 5.63. *Tree Drawings Influenced by Vector Diagram*



Note. Three examples of trees by females 38, 45, 63 from Greece that resemble a vector tree illustration (far right) (123RF, n.d.).

The use of the vector tree model by the Greek subjects is one such example of adopting appealing schemata for use in their own action/imagination drawing.

Content: Sense of Agency

The Greeks' sense of agency seems muted due possibly to lack of identification with their superhero and made evident in the direct and perfunctory means depicted to capture the villain in a limited variety of scenarios, such as robbing a bank or from a burning building. The Greeks' superheroes are the most derivative of existing superhero and movie characters, which makes their superheroes seem a step removed from their own sense of identity and therefore distanced from their sense of agency. The Greek superheroes might be interpreted as if they are borrowing an identity to wear for the task. Whereas the Americans have adapted the superhero formula to suit their needs and the Ghanaians substituted their own belief system for the superhero powers, the Greeks appear to be playing a theatrical role, which may be in itself indicative because theater arts have a central place in Greek culture.

The majority of Greek children spend most of the summer at the beach and travel on roads lined with olive and orange groves. Yet, although some of their action/I magination drawings resemble the town center where they live, many contain sparse,

schematic, urban scenes, most likely due to their familiarity with the superhero genre itself, which usually is set in densely populated areas like cities. Furthermore, the Greek children are exposed to American culture on TV, in cinemas, and online and through visits and correspondence with relatives in America or Australia.

Media

Although second to New York in frequency, the Greeks use media extensively and rather evenly between genders but for different purposes. Twice as many girls in Greece than boys spend time on the Internet trolling for music and getting information for homework assignments. The girls play *Barbie* video games and enjoy being a caretaker in *My Boo*, a virtual pet game.

The boys report playing violent video games, such as *Call of Duty* and *Mortal Kombat*, yet these scenarios did not enter into their drawings as clearly as those of the Americans. Notably, the Greeks did not use labeling or conventions and symbols from cell phone and tablet use, such as emojis, hearts, arrows, and so on. However, almost all of the Greeks used speech bubbles in their action/imagination drawings, a device employed in printed media such as cartoons and comics, which suggests that the Greek children associated superheroes with comic books. The format of their drawings with the figures in a stage-like setting also might be explained by the strong cultural influence of the Greek Theater. Theater productions take place, especially in summer, at outdoor venues throughout the country, with the local theater troupe from Molaos having gained national recognition.

The Ghanaians

Art Teacher

The Ghanaian art teacher comes from a middle class background. She attended Wesley College in Kumasi, which was founded by the Dutch, and, apart from taking Creative Arts in school, has no art training. She does not make art except for drawings of

clothing designs to share with her boyfriend, a clothing designer, and with her students as well (see Figure 5.64). The Ghanaian art teacher is soft-spoken, and her approach to education is child-centered in a manner that seems to emerge more from her personality than from any formal training. She is very aware of her students' backgrounds, home life, and circumstances developed and maintained through visits to the children at home and conversations with parents.

Figure 5.64. *Ghanaian Art Teacher's Sketch Book*



Note. Ghanaian art teacher's sketch book with fashion design drawings.

The Ghanaian art teacher follows the mandated Creative Arts curriculum, which includes all arts disciplines; she does not write her own lesson plans. There is an emphasis upon drawing musical instruments rather than the human figure, which is included in the science curriculum. Importance is placed on dance and body movement, considered key to many of their lessons.

The children have done drawing from imagination with the art teacher, which she reports they like doing very much. When asked what drawing lessons she did with her students before the study, the Ghanaian art teacher replied:

I have an arts curriculum which guides me in teaching drawing. The drawing lesson plan is done for every term (semester) and it has main topics and subtopics. The drawing lesson plan I used before the study is as follows:

- making pictures, drawing and color work,
- pattern making, print making and lettering,

In addition there was:

- weaving and stitching,
- moulding items using clay,
- performance
- construction, assemblage, and paper work.

The children used the knowledge they've acquired in drawing in other instructions such as maths lessons, environmental studies, and ICT lessons.

Most of the children's drawings from Ghana are more naturalistic—even though they are mixed with some schemas—than the drawings by the children both from Greece and America. The Ghanaian art teacher's response to the question, “ Why do you think this might be so?” was:

The reason why the children's drawing from Ghana are more naturalistic is that they enjoy/like drawing and so whenever it's time for drawing lessons, they become happy and therefore they put all efforts in doing it. They prefer drawing lessons more than other subject. The differences in their experience being that with the Ghanaian children, acquiring materials for drawing lessons is difficult and so if a child is able to purchase any of the drawing materials and it's time for drawing lessons, he/she will put all his/her maximum best to do the drawing from the way he has been taught or instructed to do.

The Ghanaian children drew many of their figures in profile- the heads are turned and drawn from the side. When asked, “Is there a model that they see such as illustrations from textbooks in school or church with figures in profile?” the Ghanaian art teacher responded, “Yes, there is a model that they see. Because they enjoy drawing, whenever they see a textbook with illustrations, they have a look at it and so it helps them whenever they are having drawing lessons” (see Figure 5.65).

Figure 5.65. *Choice Drawings Copied from Models*



Note. Examples of drawings copied from pictures by free choice clockwise from top left: 'Jesus and the Messengers,' woman cooking, soccer players, Batman and Riddler.

Looking at the sketches made by copying pictures reveals models for the human figure in profile, in action, and with more than one figure in the frame (see Figure 5.65). It is also interesting that the images are focused on the figures with no background scene except for a tree with a bird in the foreground that acts more like another figure in the composition than as providing a setting.

Parents

The Ghanaian parents explained that art is a viable occupation because jobs are available to draw and paint advertisements, especially for food businesses and restaurants. Portraiture is also a means of generating an income. There is an arts

vocational high school that students from this town may attend just a kilometer down the road toward the nearby city of Kumasi, the capital of the Asante region.

Many of the Ghanaian parents did not express worry about a negative impact of media on the children; in fact, they view media, largely television, as an opportunity: “to find out about possible occupations such as newscasting; learning about God’s expectations for you from shows such as ‘The Pulpit’; telenovelas like ‘What Life Has Taken From Me’ teach life lessons,” and have positive influences on our children.” As pertains to art, parents indicated the positive influences of media on their children as a source of ideas and opportunity to copy pictures.

When asked about cultural background, the responses focused on language, Ghanaian fabrics, and funeral customs. Many parents declared being Christian and members mostly of Protestant organized religions such as Presbyterian and Seventh Day Adventist. Some parents reported religious observances attributed to Asante Indigenous Religion (AIR), such as a rite of passage ceremony for girls when they reach puberty, attended by the queen mother. A parent explained that “this is a time when the men look at the girl as a prospective bride; she is given gifts that she will need in marriage.” Parents also reported that they do not go into the fields on Fridays because it is a ‘bad’ day when the Spirits are busy out in the fields and “can get you,” so the villagers stay home.

The art teacher explained,

A lot of the children who said that they go to church once in a while do not go at all. They go out in the fields with their parents or play soccer. I have asked my students on a Monday whether or not they went to church on Sunday and those that repeatedly say no for one reason or another I came and then when I ask the following week they all have gone to church.

A characteristic critical to understanding AIR is that there is no linguistic difference between *being* and *being in a place*; therefore, existence is always connected to a location. In other words, the Supreme Being and all deities and ancestors are not “fully

immaterial, but quasi-material” (Muller, 2013, p. 43). In terms of the action/imagination drawings made by the Ghanaians, these spirits are believed to be part of the empirical world, therefore sharing the same space as beings in this world.

Style

When asked about why the Ghanaian drawings might be viewed as more naturalistic than the American and Greek drawings, the art teacher ventured this is because the children love art and having art supplies, and the opportunity to make art is highly valued. All of the students get practice drawing in school, as we have seen in their lessons and sketchbooks. The Ghanaians have a more consistent school-based art curriculum. As Wilson (2008) remarked when comparing Taiwanese and American children’s drawings, “The individual variability and inventiveness of the American drawings probably relates to less consistent school-based art programs than the Taiwanese kids’ experience” (p. 258). In addition, more of the boys than the girls self-reported they make sketches at home, which may tie in with drawing viewed as a possible means for making a living, as conveyed by the parents.

Another possible explanation for the mixed style used by the majority of Ghanaians lies in the mode of drawing. Five out of 12 of the superheroes drawn by the Ghanaians visually resemble Superman and his super powers: a red and blue costume, cape, triangular insignia on chest, belt, ability to fly, and use x-ray vision. Noteworthy here with respect to style is that to draw the Superman-like figure, the subject used recall rather than imagination to recreate the character in their mind. This may have a bearing on the style used, since it was not an original character that sprang from imaginative thought but rather an effort to reconstruct an attractive, well-known character, thus creating pressure as well as incentive for the subject to get it right.

Details

The Ghanaians did not put details into their observation and memory drawings because school uniforms are a requirement, as is closely shorn hair (boys and girls), and no accessories or adornment. In other words, these children are restricted in school from asserting their individuality in any way before they reach 18 years of age. As a result, once the drawing mode changed to using imagination, the opportunity opened up wide for the Ghanaians to include details, articulate, adorn, and embellish freely. Thus, the explosion of details in the subsequent drawings.

There is a strong tradition of textile arts in Ghana, such as Kente, Adinkra,⁵⁹ and Ankara cloth all from the Asante region. Women go to seamstresses to have their clothing made. As we have seen, the art teacher keeps a journal of fashion design sketches. These graphic fabric traditions are a great source of pride for the Ghanaians and certainly are evident in the children's drawings.

The Ghanaian drawings also reflect details from their school culture, such as the vocabulary exercise that was incorporated into the action/imagination drawing seen in Figure 5.66. Writing about the influence of school culture from her research in Kenya, Elsbeth Court (1989) explains, "Mere attendance means the children are exposed to the prevailing school art style. This comes close to a conflation of art with writing, in which drawing is like an extension of the alphabet" (p. 59).

⁵⁹Adinkra cloth is stamped and patterned with traditional Ashanti symbols using stamps customarily made from calabash gourds and a dye made from bark. Each symbol has its own meaning (PBSKids Africa, n.d.).

Figure 5.66. *Example of Influence of School Culture*



Note. Subject 32's school lesson (left), action/imagination drawing.

Stairs drawn in inverted perspective in several of the Ghanaian drawings help explain their sense of space. The three-dimensional representation of space using the Western tradition of linear perspective is too often taken for granted as the correct illustration of space (Antonova, 2010). The representation of pictorial space in images can be thought of as experiential and, in the case of Eastern Orthodox iconography, also a matter of 'inside' or 'outside' of the pictorial space. The icon in Figure 5.67, when considered as an inner view, meaning the viewer is within the picture plane and reversing the laws of linear perspective, with the vanishing point in the viewer's space. The two children's drawings beside the icon show the steps in reverse of rules of Western linear perspective in which the vertical lines should converge on a point above center. However, the experience of ascending a staircase feels and looks as if the path broadens as one climbs up toward the top. Essentially the Ghanaian children are drawing their experience of moving through space as they interpret it through some idea they have about linear perspective. Yet contrary to expectations, not one of the Greeks, who are most acquainted with images using reverse perspective, drew any object with inverted perspective.

Figure 5.67. *Reverse Perspective Depicts Experiential Space*



Note. The throne and footstool in this icon show reverse perspective, with lines converging toward the viewer [Unknown] (c. 1250/1275). Stairs inverted perspective, 18 (center) , 64 (right).

Content: Sense of Agency

Ghanaian society is a collectivist culture unlike the United States, which hails its individualism, and Greek society, which has become a modified version of collectivism infused with individualistic overtones more recently. Ghanaian houses are traditionally built around a courtyard with family quarters opening into the center and communal areas such as the kitchen consolidated at the back of the house, separate from the sleeping quarters, which are all up front surrounding the courtyard. At the back as well are extra bedrooms where the women who are menstruating must stay because they are considered not clean and therefore cannot stay in the main house. There is evidence of the collectivist mindset in the children’s description of their best characteristics, such as, “I am respectful and people see me as being respectful, and something I would change about myself is insulting other people.” These responses are concerned with the effect of their actions on others, for the good of the community, as well as how this reflects on

themselves and their family. This may well be the reason that all of the Ghanaians drew powers with agency for rescuing others. Also, being part of a study, the Ghanaians likely felt compelled to show themselves at their best.

Because traditional Asante religion was primarily based around the worship of spiritual forces that structured the universe (Marshall, 2007), it is not surprising many of the Ghanaians declared having superhero powers that could control forces of nature to benefit or protect humans, such as making it rain, producing food, and felling trees by command. According to Sowah Ablorh (2018), Africans experience a deep sense of connection to nature. The Akan belief system contends that survival of humans and their community depends upon help given by ancestors and divinities (p. 23)

Media

The most widely accessible media influence for the Ghanaians is television broadcasts of programs, telenovelas, movies—both national and international—and music videos. In many ways, the media reinforce the Ghanaian embrace of modernism while maintaining traditional customs.

For example, the Ghanaian rapper Guru is enormously popular for combining English and indigenous languages from Ghana in his raps, known as hiplife.⁶⁰ This style reflects popular culture trends in Ghana as well as educational reforms underway to roll back the British school system held over from colonization and include traditional Ghanaian arts in curricula. Also, in addition to the Miss Ghana competition, which leads into the Miss Universe Pageant, the Ghanaians have a competition called “Ghana Most Beautiful,” where a woman from each of the 10 regions competes based on epitomizing

⁶⁰Hiplife is a Ghanaian style of music that is a fusion of hip hop and Ghanaian culture (“hiplife,” 2020).

cultural traditions: language fluency, dancing, appearance, demeanor, with physical beauty not a criterion.

Summation

The goal of Chapter V is to augment the understanding of the drawings scored from the “outside,” to include autobiographical and anecdotal information supplied by the children, teachers, and family members. Such accounts, it is suggested, offer important insights into some of the prevailing influences that shape children’s artistic expression at a deeper level and that activate their sense of agency in the world. Influences reflect cultural trends shaped by media usage tempered by personality and interests. Trends evident across each culture mainly originate from societal constructs interpreted by the individual in terms of artistic process and creative thinking.

For example, the American children’s drawings revealed a diverse collection of superpower images based on either video game tropes, a cartoon character persona, or some form of psychological intervention, such as 6, who explained, “I helped a little girl find love because she didn’t have love and was very sad by talking to her about how she can find love,” or 61, who wrote, “I made a little boy happy who was the victim of bullying by showing him pictures of animals.” Also, the incidence of American children changing from mixed to schematic style from the observation to memory drawing came as a surprise. This may simply be a result of not having as much experience drawing the human figure from memory as from observation. It appears that the Americans’ ease with using schematics readily became their solution to the challenge of using descriptive line, contour, and natural proportions to describe their own full body image from recall. It would be fair to argue that the American drawings reflect American culture: individualistic, diverse, media-driven, using a limited drawing vocabulary of visual

shortcuts and abbreviations similar to linguist John McWhorter's (2013) description of texting as "fingered speech."

The Greeks' sense of agency, however, is more muted than either the Americans' or Ghanaians'. Whether they borrowed from traditional or media sources, the interview data from the children and their teacher suggest that most of the Greeks do not express themselves through any internalized identification with their superhero character. This is evident partially in the lack of variety in the characterizations. Specifically, most of the Greek children's superpowers include flying and strength, their action/imagination drawings illustrate a city unlike the town where they live, and a majority of the perilous situations involve stopping a thief from robbing a bank or rescuing people from a burning building. Their written commentaries reveal extensive media knowledge, borrowing images and themes mostly from movies and TV shows; however, the Greeks do not use labeling or incorporate conventions derived from phone and tablet use. Nearly every action/imagination drawing uses speech bubbles, suggesting a strong influence from printed media and perhaps Greek theater. In a society that embraces both collectivism and individualism, the Greek children borrowed and shared images with one another the most and notably declared in their statements that they value family and friends above all else. Therefore, what most likely makes the Greek superheroes seem a step removed from their own sense of identity and therefore distanced from their sense of agency may possibly be because they didn't identify with the people they were rescuing.

While reviving and maintaining traditional customs, the Ghanaian interview data suggest that the children in this study adopted and transformed American superheroes for their own purposes or borrowed some of the more salient characteristics of the superhero prototype, such as x-ray vision and a red and blue costume with a triangular insignia on the chest. They also borrowed from their own folk traditions to create hybrid saviors for the people, as we saw in drawings 26 and 59. Perhaps most striking of all is the way in which the Ghanaian drawings invite the viewer into the picture plane, mostly through use

of scale, overlapping, and figures in profile view. The interview data strongly suggest that the Ghanaian children's drawing skills might be a product of their school arts curriculum, including influence from book illustrations, and practice copying images from a variety of sources, both intramurally and extracurricularly.

Chapter V used the autobiographical information supplied by children, teachers, and family members to examine how style, details, content, and media use assumed a dominant role within the drawings and discussed how the results are cast differently within the three cultures. Chapter VI will summarize the findings of the study, present the argument that lack of drawing experience mediated children's ability to express their ideas, and offer lesson suggestions and recommendations for the field of Art Education moving forward.

Chapter VI
EDUCATIONAL IMPLICATIONS AND
RECOMMENDATIONS FOR ART EDUCATION

Introduction: Where the Outside and Inside Meet

In Chapter V, it was argued that the most apparent influences on the content of the participants' drawings come from their environment and cultural trends, interpreted by individual personal interests, and shaped by media utilization. Furthermore, in addition to media, trends across each culture mainly originate from societal constructs, specifically school, material (such as clothing and religious images), and folk culture. Chapter VI summarizes the findings of the study and the argument that lack of drawing experience mediated children's ability to express their ideas and, in many cases, appeared to invite the use of digital imagery. This chapter expands upon the implications of these findings for teaching, offering a pedagogical approach and specific project and lesson suggestions along with recommendations for the field of art education.

Summary of Findings

The structures generated from within the children are dynamic systems which attract some—but not all—input from the environment, transforming it into a reconstruction of reality. The children are responsive to a variety of input, organized into coherent patterns by the dynamic systems generated by children. (Matthews, 1999, p. 8)

This quote from John Matthews was chosen to open a discussion of the educational implications of this study because it highlights the depth of agency it might be assumed these children have over their drawings (with varying degrees of awareness), crediting them with using systems of their own personal construction, in part, to integrate information they are receiving from the outside world into their artistic expression. Children then re-present reality through the lens of their own interests and values and, in terms of this study, modified by media use.

Having considered the set of drawings each child made as a *network of enterprise*¹ emphasizes the active role the children played in the production of the artwork, involving their choices of theme and content, the media images incorporated, and the means by which a task was adapted to suit their interests. However, the results also show that the specific skills—drawing from observation, memory, and imagination—required by the four drawing tasks had a tempering effect on their power of agency. It is important to recognize the agency children have over their drawing for the purpose of honoring and supporting their art education. Viewing the results in terms of specific skills as they relate to the drawing task:

- suggests that there appears to be a paucity of observational drawing experiences among the young people in this study, and what skills some of them have mastered appear not to transfer to memory tasks.
- suggests that both memory and imagination drawings were influenced by media sources, sometimes reflecting personal interpretations, sometimes simply copied and incorporated.
- suggests that imaginative work was more influenced by local, social, and cultural contexts.

¹explained on p. 185, Chapter V.

Teacher Feedback on Local Curriculum and Assessment

The findings of this study suggest that the children's limited drawing experience constrains their ability to express themselves in pictorial representation with fluency, whether they are drawing from observation, memory, or imagination. This section reviews the teachers' commentaries about their drawing curriculum to explore possible explanations for the limitations in drawing facility of the participants from each culture and to inform recommendations for the future.

The American art teacher stated that her art curriculum included portraiture and figure drawing, and that "often students worked from observation when drawing more representational work." Although the American teacher attested that her students had experience drawing the figure and working from observation, the style of drawing with which the American students had the greatest facility was conventional and schematic. The Greek teacher also had still-life drawing and portraiture listed as part of her art curriculum, but with cursory attention paid to drawing in general. The majority of emphasis, reportedly, was placed upon sculptural construction projects that explored imaginative themes. The Ghanaians, according to their teacher, did not have experience drawing from observation, but rather from copying. Although the Ghanaians did not have self-portrait drawing experience, they had copying practice, and that was reflected in the style of their drawings, which noticeably contained little in the way of the media-generated schemas and conventions.

The American art teacher recounted using the TAB system with her students and posting a checklist for students to follow. Giving children a rubric to follow is a questionable practice at best because, rather than promote reflective, creative thinking, it discourages autonomy by prescribing what belongs in an artwork. Also, the scale grading system evident in the Ghanaian art classroom created an atmosphere of expectation for a certain style of realistic drawing. Rote copying of illustrations was a driving force in the

Ghanaian creative output. The American and Greek teachers also mentioned that there is some use of drawing in other subjects, and the Ghanaian teacher reported some arts integration in word study and in science.

The teachers in this study have reported they teach lessons to support the learning of figure drawing, either through observation or copying from illustrations used as models. However, the children's drawings speak to a different dynamic. The findings suggest that to compensate for the gaps of observed information in their artistic repertoire, the participants relied upon generally accepted symbolic conventions, whether from local culture or media images, with which they are most practiced and confident. A respectful, safe, and supportive environment is required in order to create a sea change, for students to relinquish the schemas they habitually employ as visual references and to open themselves to art instruction that demands risk taking.

In the following section, a pedagogical approach is recommended concerning building a relationship between student and teacher for working through uncomfortable passages when children's drawings do not meet their vision, as they try to figure out for themselves how to shape line into forms to make the expressive images they wish to create. Suggestions follow for lessons that develop drawing experience across drawing modes to best support successful learning.

Pedagogical Approach

This inquiry began with the goal of making me a better teacher, one whose art studio provides a democratic space of encounter for students to realize their visual ideas and sense of agency through meaning-making. When I reflect upon whether the educational environment I intend to create is indeed what I have created, the answer leads back to the relationship between teacher and student. My pedagogical approach aligns with the learner's mode of learning suggested by art educator Dennis Atkinson (2017),

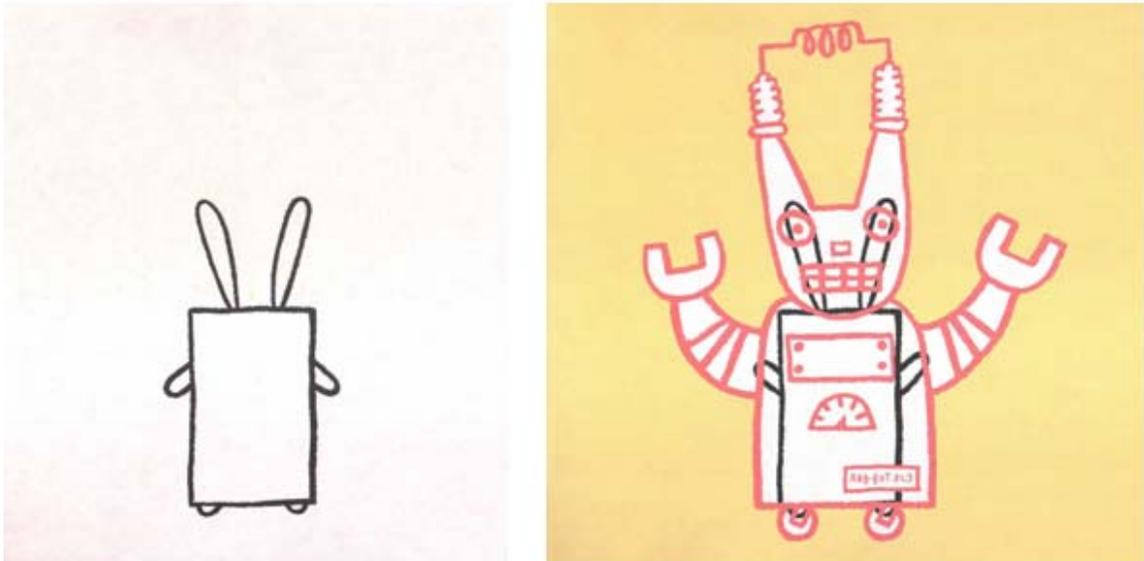
which asks the educator to ascertain how something matters for the learner through their encounter with the student. Accomplishing this requires a teacher to enter into a conversation with a student as an equal partner. By relaxing the power of established knowledge, the teacher recognizes a learner's mode of existence as a privilege and an opportunity to share information and to grow, from which something new can emerge. Reflecting upon my own practice, I discovered that, although I design lesson motivations that are open-ended for students to interpret and make their own choices, the fact that I set the motivation, no matter how general the concept, subtly presets my authority over the process and outcome of the project. In response to this realization, I am adjusting my approach to lesson planning so as to initiate the inquiry process with the student's ideas instead of my own. Certainly, lessons on technique and for developing drawings skills remain an important part of the art curriculum, especially in light of the findings of this study, but should be undertaken with teacher and student entering into equal partnership. Eliminating preconceived lesson prompts also raises the issue of assessment criteria.

Atkinson (2017) advocates that teachers should honor what matters to the learner by releasing the entire learning encounter from the prescribed reinforcement of assessment, which constricts the opportunities and potentials for learning to happen by predicting the outcome in order to measure the process. Rubrics and checklists direct the process with preconceived parameters and do not allow learning to unfold naturally. To what degree, though, in reality, are art teachers able to suspend assessment protocol in an art studio classroom within an educational institution and survive the accountability measures that judge whether or not they are doing their job?

For myself, as a practicing elementary art teacher in a public school in New York City, I find that the best means to counter-balance the pressures of quantitative assessment is to acknowledge that in the real world there are real pressures outside our control as art educators, and then to use a qualitative system about process and personal accountability. Theory is accused of living in an ivory tower, but theory gives us the

means, in the words of Maxine Greene (2001), to act “as-if,” to move into the world of creativity through the portal of our own lived experience (p. 82). Working toward potential yet to be realized, what I can achieve when I act “as-if” is certainly greater than the sum of the parts. This is what assessment fails to recognize. Art education needs not only to survive, but to thrive in the public schools, providing democratic spaces of encounter. I suggest that we seek out what children are asking to know by listening to them and using every means available to support them in attaining their creative vision. We need to advocate for students to be treated as artists in the art room and stop trying to prove that art learning CAN be assessed. The illustration in Figure 6.1 is my favorite example of magical thinking and of the teaching spirit I endeavor to maintain with my students because it honors the creative thought process of the child.

Figure 6.1. *Not a Box*



Note. Pages 14-17 from the children’s book *Not a Box* by Antoinette Portis.

Suggestions for Drawing Lessons

In the drawings for this study, we have seen children use the resources at hand and refashion them for their own purposes, from merging folklore motifs with action heroes to co-opting video game layouts and creating hybrid versions of themselves with their favorite movie character. Consistent with the quote from John Matthews at the beginning of the chapter and with the findings of the study, we see children generate systems for transforming input from their environment into their reconstruction of reality. How can this inform lesson planning and art teaching? Every conversation with a student is an opportunity to explore meaning-making and artistic expression. For instance, yesterday when I asked a student what she would like a drawing lesson to be about, she replied with the name of someone on TikTok² because this person is attractive and popular. Figure drawing would be a logical starting place for instructing this student, and this conversation could continue and potentially expand to the varied methods of composing a figure, which include manga styles and cartoon imagery, and might lead into other content areas and mediums of expression. The point being that the student, rather than the teacher, initiates the focal point for his or her artistic inquiry. Once the theme for exploration is established, how might lessons unfold in a manner that best supports the evolution of students' drawing skills?

The results of this study suggest that children's limited drawing experience constrains their ability to express themselves in pictorial representation with fluency, whether drawing from observation, memory, or imagination. In view of these findings, lesson suggestions are designed to develop drawing skills specifically by moving back and forth across drawing modes to emphasize how one type of drawing enriches the other, in a rhizomatic manner of thinking.

²TikTok is a Chinese video-sharing social networking service. It is used to create short music, lip-sync, dance, comedy and talent videos of 3 to 15 seconds, and short looping videos of 3 to 60 seconds (Wikipedia <https://en.wikipedia.org/wiki/TikTok>).

As a practiced teacher of drawing, I also offer lesson suggestions that are an established part of my curriculum for developing drawing skills through sensory perception. Another consideration in the creation of these lessons is cultivating creative connections to provide a continuity in thinking about the natural and digital worlds that highlights the interconnectedness of our worldly experiences.

Drawing from Observation

The key to observation drawing is understanding that the act of observing, through all of the senses, can be expressed through just about any medium fashioned to the purpose. Central to image making are ideas, and the tools and materials chosen to express those ideas. I favor promoting drawing as a full body, kinesthetic exploration of materials. A way to introduce the physical connection between body and material is to begin with sand drawing, creating an atmosphere in the art room with the lights dimmed and a video of an artist drawing with sand. Students are then given paper and sand with which to connect the possibilities for representation using an unconventional material. In doing this, the notion of what qualifies as a drawing material is opened up to consideration while centering art-making in the process of transforming a material that is ephemeral and impermanent. The experience is fun and guides students away from the product as teleological goal.

Across Three Modes of Drawing: Observation, Memory, Imagination

An example of exploring drawing across modes begins with a question: How can we use all of our senses to observe? Other approaches explore ways to observe, then to draw from memory and imagination. Students are asked to do two drawings, one blindfolded,³ the other sighted. Wearing the blindfold, students pull an object out of a bag

³Take caution here to ascertain that the children in the class will not be traumatized by this activity because of personal history. Be sure to speak with colleagues first.

containing items such as shells, toy creatures, or action figures, and are instructed to hold the object in their hand first and “observe” the object using their sense of touch. Next, students are instructed to draw the object as best they can while referencing the haptic qualities of the object they are holding. Once they have finished, students remove the blindfold and draw the object from sight. A class discussion follows, comparing the two methods of drawing, prompting opinions about drawing preference. Usually half the students express that blindfolded drawing removes the pressure to draw something “correctly,” whereas the others prefer to “see” what they are doing. In either case, this experience helps learners expand how they gather information while increasing their awareness of their environment. Next, with the shell or toy out of sight, students visualize and draw the object in their mind from memory. A variety of drawing materials should be on hand so students can explore the process of accessing representation through memory in terms of the range of possibilities materials offer. Mindfulness exercises might be incorporated into the session and the general art studio practice as well. The final drawing proposes using imagination to draw the creature that might live in the shell, or the habitat in which the sea creature lives or the action figure engages in adventure. The experience of moving from observation to memory and then imaginative drawing provides students opportunities to broaden their drawing experience and understanding of each process.

Visualization in Many Forms

Considering bodily-kinesthetic thinking in the art studio involves visualization, meaning the act of creating or bringing forth from recall an image in the mind’s eye. Visualization is often thought of as using our imagination or memory to summon an image, but we might use the physical body as a source of information as well.

The exploration of mark-making serves well as a primary place to start, with a warm-up exercise involving drawing big, large lines to music, encouraging students to use the movement of their entire arm, to the extent that this is possible, to draw. Next,

students act out different types of marks and lines using their entire body. This is not a startlingly new approach to teaching art unless one has not tried it before. One might dialogue about different types of lines, asking students to name lines and act them out with their body. I prefer to do this visually and kinesthetically with as few words as possible, using music and/or a slide show of images as cues for students to interpret with their bodies silently, as boldly or subtly as the image inspires. I include pictures impossible to reproduce with the body in a static position, and children quickly improvise and use movement to express the trace, flow, or rhythm of marks and lines. Once students have explored inhabiting mark-making kinesthetically, they explore using a variety of materials, including digital tablets (iPads) when available, and on various size scales. Among many variations, for example, is to have students draw from a standing position, on large paper, using a long stick with the drawing material secured to the end.

Gesture and contour drawing study provide an opportunity for children to work with partners—one acting as the model while the other draws. Enter into gesture drawing with a discussion of body language and an exploration of how we communicate using gestures. Then, using large paper and a choice of drawing materials, such as marker, crayon, charcoal, etc., explore using line to record essential movement or the energy of the model in a series of three quick drawings made one on top of the other. The teacher can demonstrate this for the class with the assistance of a student. Then, working with partners, students take turns modeling for one another. Props might be used, such as a piece of cloth or scarf, to emphasize movement. Students can photograph each other in motion, to study and for future reference.

Simple contour drawing may be thought of as tracing around the outside edge of the subject. To make this evident, one might use a string or a light pointer to emphasize the silhouette of an object by way of example. To remove the onus of making a drawing that is correct, do blind contour drawings, which require the artist to focus on the subject, as if the eye is connected to the hand as it draws without looking at the paper, or glancing

at it as little as possible. The teacher models the technique, and then students model for each other. Encourage students to carefully observe how the parts of the body are positioned, and then have them photograph each other for closer examination and use in future projects.

A lesson that challenges the awareness of one's own body can also be done with a partner. This lesson has two parts. The first part explores emotional healing through body work. Working in pairs, students take turns telling each other about an experience that had a negative emotional impact on them. Then one person shows how this experience felt, using only their body. Next their partner "neutralizes" the physical expression of emotion by repositioning the limbs of their body, and then they switch roles.

For the second part, one child chooses a photo of a person in motion, such as a professional athlete, dancer, or performer, from several pre-printed images. The student then carefully directs their partner into the pose using verbal cues and by adjusting their limbs gently to fine-tune the nuances of the pose without revealing the activity generating the pose. The child who is posing takes time to think about the appearance of his or her body holding the pose. With an image of themselves in mind that is informed by physical "memory," the students draw themselves as they envision they appeared in the pose. The partners switch roles, choose a new photograph, and repeat the exercise. Afterwards, both children are given the photograph that their partner used as a guide to compare with their drawing. Next, both students draw a copy of the figure in the photograph, exploring the visual image in terms of physical experience as well as incorporating copying drawing into their artistic repertoire.

Using kinesthetic visualization as a mode of entry into image-making provides rich learning opportunities for students of all abilities to develop their drawing and creative thinking skills. Stylization, meaning personal manner of visual expression, should emerge from conscious, creative decision-making using an abundant and accessible graphic

vocabulary rather than imitation of a rote, formulaic solution. As art educators we owe it to our students to give them the tools they need to match their ideas.

Experiential Points of Entry into Drawing

Utilize children's experience of their environment as the point of entry into developing deeper understandings of the potential of materials and possibilities for ideas. For instance, approach a lesson on shading by demonstrating how the appearance of objects changes in a darkened room by gradually allowing light to enter and illuminate the subject. Depicting volume in a drawing might be approached as a sculptural experience. Rather than beginning with an additive method of shading, such as building up graphite on the surface of the paper, try using charcoal to fill the page and then "carve" the light portions away with a kneadable eraser. Give students opportunities to set up their own arrangements for a drawing using their choice of objects from a variety provided, as well as brought from home. Venture outside and draw whenever possible, or look out the window for scenes to draw. Collect items to bring back to the art room for drawing projects. Facilitate building strategies for depicting space by focusing observation drawing on places and spaces. Introduce the use of color through exploration of as wide a variety of materials as possible, including using gel transparencies to invoke the role light plays in our environmental experience of color.

Portraiture and Social-Emotional Learning

Drawing portraits and self-portraits can be especially daunting because of the level of intimacy involved in close examination of another human being or one's own reflection. Working with students in groups and individually, practice observing the subject, or a part of the subject, and deconstructing the image, breaking it down into information that is manageable and can be translated onto the page. Use mirrors for self-portraits. Make practice part of a routine that involves sketchbooks whenever possible.

Portraiture as a drawing activity provides an avenue for children to envision their potential. One motivation is to appraise the qualities the President of the United States should embody and imagine you are the President of the United States; how would you pose to have your photograph taken? Students could draw their self-portrait from the photograph or directly from observation using a mirror.

Students might also work in pairs to interview each other and then use this information to do a portrait of one another. Examples of artists interviewing their portrait subject to personalize their work include Amy Sherard and Kehinde Wiley, for their portraits of the Obamas. A variation on this portrait lesson is to have students connect with members of the community, interview them, and then create their portrait. The work of Jordan Casteel provides examples of an artist whose work highlights the use of relationships built with people in her neighborhood as part of her artistic process.

A variation on portraiture that combines observation with imagination drawing is to draw your best friend as an alien. Working in pairs, instruct students to look carefully at each other as if you are trying to memorize your friend's face and then take a photo of each other. Next, draw your friend from memory. Then take turns modeling and draw your friend from observation. Now imagine that your friend has just told you that he or she is actually an alien. Use imagination to transform your friend into an alien, using the photo as an additional reference.

Drawing from Memory

Drawing from memory is involved in much of the artwork created in the art room. Memories are often accessed through one of our senses being stimulated, often unexpectedly. An exploration of textures from a collection of fabric and objects can motivate a drawing from memory coordinated with a drawing medium such as charcoal or oil pastel. Memories might also be created by taking students for a walk around the block with the intention of gathering as much visual information as possible. Upon

returning to the art studio, ask students to draw a picture of a scene that stood out to them. The class might then share their drawings and, as a collective activity based on recall, place their drawings in the order the class encountered the images during their excursion.

Drawing that taps into memory of real, and possibly virtual, places can be about creating a visual map. Gather the class and ask them to pretend they are riding a motorcycle, because the view from a motorcycle is unobstructed by the frame of the car. Ask students to visualize riding to their favorite place and what they see along the way. This may entail entering a virtual world, such as video game terrain. Just as real environments are understood as places that are felt, imagined, and negotiated, so too are digital environments. Digital overlay, a term introduced in Chapter II, becomes especially perceptible when considering children's play and video games (Kendall, 2002). Children's drawings may be thought of as places of overlay as well, especially when the manner of initiating the drawing is a playful engagement with concepts. Once the "ride" is over, and the destination reached, ask students to draw a "map" to their favorite place using line to trace the course and pictures of salient details placed along the way to illustrate specific "landmarks." Explore the work of Jim Roche as a possible closure for this project.

Another suggestion for a means of exploring the affective domain and memory is a project I have done at my parent-child workshops. Image-making is initiated by the question, what does home mean to you? Working in parent-child pairs, participants share with each other their defining qualities for home, and then draw the other's picture of home.

The following drawing lesson relates to the work of art educator Marion Richardson (1892-1946), who developed the "word picture" technique. While their eyes were shut, Richardson gave her students a "word picture" or verbally detailed description of a scene as their departure point for the picture they would create (P. Smith, 1996). Have students write a narrative about an event, such as the best party they ever attended,

with as many details as they can summon. Then, working in pairs, one partner reads the other's story to them as they draw the picture of the party. Is there music at the party? Listen to the music while drawing. Whenever possible, students might find a photo of a family event or party and bring it in from home to study and share.

Imagination

Drawing from imagination requires much more than simply showing up to the paper. The ability to bring forth the images one imagines relies upon the breadth of one's artistic repertoire. In addition to practicing drawing from observation and memory, exploring tools, techniques, and concepts will help prepare students to achieve their imaginative, creative ambitions. Materials explorations should also include using pen and ink as a prelude into cartoon drawing.

Look at examples of magical thinking and the devices used by artists to convey visual ideas in this genre, such as techniques for depicting space: bird's-eye view, scale, and juxtaposition. For example, create a challenge in a lesson about the visual effect of scale in a picture by juxtaposing objects of different or unrealistic sizes relative to the other objects in the picture. A prompt could be to imagine that you wake up one morning and you are either very small or very big. Draw a picture of what would happen when you tell someone else, your mom or a friend, for example, and how they react when they discover what has happened.

Cartoons and Comics

Help students learn to draw by deconstructing their favorite cartoon characters. Study the conventions, visual codes, and techniques used in graphic novels, comic books, and cartoons to help students recognize and understand these devices. A keystone of cartoons and comics is the pictorial depiction of movement. Study people and things in motion. Choose a subject in motion to practice drawing. Some examples are cars, birds in

flight, athletes. You may use a photo found on the internet and also refer back to the photos taken by a partner during observation drawing lessons.

Devise ways to help students grasp the visual thinking behind graphic cartoon concepts, such as the use of a panel or individual frame. Give students a sequence of three panels, with the third containing a character of their choice, and ask: What could you put in the first two boxes to tell the story? Demonstrate drawing some favorite cartoons while explaining the different possibilities of telling a visual story through choices in composition, placement, and how the action builds from one panel to the next. Once students have developed their artistic repertoire around the mechanics of graphic imagery, encourage them to invent cartoon characters of their own.

Exploring Connections Between Nature and Technology

In his book, *Education Through Art*, Sir Herbert Read (1943) calls for an *aesthetic* education where sensory experiences connect us with our world and through which we negotiate balance between our inner selves and the society in which we live. In today's reality where natural and virtual experiences overlap, children navigate their reality directly through their senses and using digital technology. Lessons that provide opportunities for students to explore the relationship between nature and technology through observation, memory, and imagination drawing deepen children's drawing experience.

Roots and Networks

Finding the means for students to connect with the natural world and relating these to the digital world create exciting possibilities for drawing. For example, drawing projects related to growing plants in the art room are fun and generate a sense of caring and community. A wonderful point of departure for artistic investigation is to sprout avocado seeds in jars of water so that the root system is visible. A discussion of the purpose and working process of the root system can lead to exploring what other systems

or networks exist in our lives. What lies beneath the surface that we cannot readily see? How can we think about this metaphorically? Drawings made from plant observations might lead to imaginative hybrid compositions. For example, a collection of parts from electrical and digital appliances could spark a drawing using imagination to transform the natural and mechanical into a cybernetic organism. Imagine if computers had a sense of taste or smell.

The project “One Beat One Tree” by environmental artist Naziha Mestaoui (see Figure 6.2) is an example to share with students that aligns technology and nature while promoting awareness about conserving natural resources. The “One Beat One Tree” installation projects a virtual forest onto city buildings while viewers, connected to a heartbeat sensor through their smartphone, watch a virtual tree grow to the rhythm of their heart. Physical trees are later planted throughout the world. A drawing lesson could start from observation of a tree or anything growing in nature outside. Upon returning indoors, students draw the organism from memory. Then, ask students to create a drawing from imagination of the organism growing to the beat of their heart.

Figure 6.2. *Installation “One Beat One Tree” by Naziha Mestaoui, 2014, Projected onto the Hôtel de Ville in Paris, France*



Artistic Consciousness: Building Confidence and Autonomy

Art educator Henry Schaeffer-Simmern (2003) believed in the theory of *artistic consciousness* that states everyone is born with the ability to transform perceptual experiences into images. Schaeffer-Simmern based his teaching practice upon this theory, expressly challenging his art students to develop their inner artistic sense by evaluating their own artwork. *Artistic cognition* certainly has its place in this discussion as we, as art educators, continue to search out creative means to help students develop artistic autonomy.

One last concern that bears mentioning is the process that invokes inhibitors on children's use of drawing as they become acclimatized to their culture, which has been termed *acculturation*. As art educator Dennis Atkinson (1991) cautions, "when we consider the use of drawing in relation to the process of acculturation, both use, and hence value, have a tendency to narrow" (pp. 150-151). Therefore, opportunities that support a child's growth in considering their own art-making process and artwork are beneficial to promote a sense of ownership, accomplishment, and independence. Considering a child in this position, it is helpful to keep in mind that fifth-graders often express the benefits of working with others because they appreciate help from classmates, the exchange of ideas, and having an opportunity to see how others work.

Summary

Art has the power to make new worlds visible, offering many means for understanding and making meaning that produce new identities and citizens, as relationships and the matter that connects us take center stage. This chapter has explored ways to develop drawing skills and explore our relationship with the natural world in the art studio classroom, and has examined some of the defining qualities of a child's experience in the world today, particularly as associated with media technology. It is

important to give credit to children for their graphic production as we have seen these children from three different cultures forming their own visual systems of expression influenced by the macrocosms within which they live. Chapter VII takes what has been learned through reflection upon this study of the network of influences on children's art-making to a recognition and discussion of possibilities for future research studies in art education.

Chapter VII

CONCLUSION

The idea for this dissertation began with a question, “Will you be my friend?” I was visiting the school in Agona, Ghana, where my colleagues were teaching. We had connected online through an educational partnership program to do an exchange project between our schools. This was my first trip to Africa. The fifth-grade student asking the question, in Agona, wanted me to friend her on Facebook. Standing together in the school courtyard, it struck me how Internet communication had brought us literally face to face, and her invitation to connect on social media reminded me of my students back home in the Bronx, New York. Issues came to mind about the use of electronic devices for access to social media platforms that seeded the beginning of my inquiry into the impact of digital media culture on children’s art-making and thinking.

This study, as it developed, presented fifth-grade students in three different cultures—Ghana, Greece, and the United States—with the task of drawing self-portraits from observation, memory, and imagination. Every child created a set of four drawings—observation, memory, memory/imagination, and action/imagination—and wrote personal descriptions of their superhero and themselves. This study was guided by the following questions:

- What might be learned about the network of influences, including digital media, that shape the drawing and thinking of the elementary-school age students in this study?

- In what way do the drawings reflect children's sense of agency or purpose in the world?

In response to the first question, the most striking influence occurred in the style of the drawings themselves, with the American children creating the most schematic drawings, heavily influenced by digital imagery, the Greek children also producing schematic drawings that included media images, and the Ghanaian children constructing drawings in a mixed style that were both schematic and naturalistic, while also appearing more stylized. This study concludes that the American and Greek children's shortfall in acquired drawing skills hindered their ability to transfer their experience from observation to memory drawing. It was argued that lack of drawing experience mediated their ability to express their ideas and, in many cases, appeared to invite the use of digital imagery. Devices, symbols, and conventions found in digital media culture appear in the drawings of the American and Greek children, who expressed this in their interview material, to the extent that the children interacted with these digital platforms. The Ghanaian children, whose reported access to digital media is more limited, did not include media-related symbolism in their drawings, other than in very basic form, such as lines to show the trajectory of an object. However, participants from all three cultures elected to use copied images and to incorporate elements from media imagery into their memory and imagination drawings to create personal interpretations. All of the drawings are influenced by the children's environment; where there is less media influence, local social and cultural sources are tapped. Greater interaction with digital culture is particularly evident in the background setting of the American and Greek children's action/imagination drawings that depict virtual rather than natural viewsapes.

In response to the second question, the superhero theme for the imagination drawing was intentionally chosen for its potential universality and acted as a window into the children's sense of agency. Aided by the individual commentaries, the superpowers chosen by the participant provided a lucid indication of what the child imagined they

might be capable of doing in response to a threat, as well as the specific means by which to do it, such as healing someone's emotional pain through listening to uplifting music, delivering criminals to the justice system, and faith in using the powers of nature to provide people with sustenance and protection. The children from each country generally worked distinctively within the superhero paradigm, producing drawings whose content reflected dominant trends in the social fabric of each cultural system. The Americans reinvented superheroes for their own purposes, largely influenced by social-emotional awareness and video game platforms, with the least amount of attention (relative to the other groups) devoted to rescuing people in peril. The Greeks were inventive with their superhero imagery and included references in their artwork to mainstream cultural images, mostly from movies and religious iconography; yet they were more generic in their rescue scenarios, employing themes limited primarily to bank robbery and burning buildings. The Ghanaians created hybrid superheroes that combined the children's knowledge of superheroes, gained mostly from televised movies, with traditional mythology, using their invented powers to save people from emergencies caused by natural disasters. The content of the imagination drawings and personal insights gained from the children's commentaries provided not only a deeper understanding of their sense of agency in the world but also what they fear: the Americans' agency is psychological, as they fear being emotionally unsatisfied, losing the game. The Greeks were occupied with physical capture of the villain or rescue of the victim, showing fear of threats to person or property. Every Ghanaian illustrated rescuing people from some form of natural disaster. Interaction with digital and mainstream culture certainly impacted the children's sense of self and artistic expression. What does this tell us for the future?

Suggestions for Future Research

There are three main directions for further inquiry: the evolution of children's identity and sense of agency in the world through artistic expression; the role of the environment in which children draw as an embodied and embedded experience in a physical and sociocultural world; and further research into how and why children use images to communicate.

It is generally acknowledged that young children not only engage with digital media but do so even more than is reported. Certainly, further art research inquiries into the impact this has on elementary-school age children's sense of self and artistic expression would be useful to educators, especially studies designed to include direct feedback from children about their drawings. Inquiries that examine the relationship between identity formation and engagement with social media in elementary-age children in terms of factors such as gender (as self-reported), race, and economics would prove essential to educators. It would also be useful to design these future studies using artistic mediums such as mixed media, video, and performance art. With our goal as educators being to prepare our students to be successful, the question of agency becomes profound, especially when how children perceive their capabilities is a function of their living experience, both tangible and electronic, in an ever-changing world.

Regarding media, specifically where working memory is concerned, what effect does shortened attention span promoted by media usage have on children's creative thinking and production? If we accept these forms of intelligence as distinctive, but not exclusive of other types of thought, then what arises is the question: Can spatial and physical modes of thinking be modified or diminished by screen time and/or promoted through engagement, and how so? Another concern connected with screen time is sleep, both quality and quantity, as a factor to be explored in children's learning capability in school. This leads to the issue of environment.

As we have seen evidence of in this study, children's drawing is significantly influenced by pictures available in the child's environment, be this onsite or online. Psychologists such as G. V. Thomas (1995) suggest that it is impossible for children to make a picture without having learned how to do so from other pictures and, in addition, that better visual knowledge of an object to be represented does not improve children's drawing. Thomas states that children's spontaneous drawings are mostly from memory or copied, not informed by the referent but based upon a pictorial schema copied from pictures seen in the past and built into their repertoire through trial and error. Studies that explore these assertions could prove useful to art educators and educators in general, especially when framed in the understanding of drawing as a rhizomatic process that is shaped culturally and socially.

Research on the role peer interactions play in children's art-making, especially in online forums, would contribute to the field of art education. However, such studies are challenged by the ability to gather data when age limits that exist for using these platforms may prohibit truthful reporting. Research on how images are transmitted could also be useful, such as by introducing a rogue style deliberately among a set of children and then tracing how it spreads (Cox, 1993). In terms of social influences, a study might investigate what role reflective thinking individually or in a group discussion plays in students' critical appraisal of their own artwork.

The role of the environment in which children create art raises one last issue deserving of consideration, namely, the degree of efficacy art programs have in public schools, specifically at the elementary level. Are the school schedule and culture most beneficial to art learning or too restrictive in terms of scheduling, interdisciplinary planning, and general attitudes toward the value of art in education and the training and expertise art teachers at all levels should possess? Is it time not only for a change in drawing instruction but also in educational structure?

Why draw at all in the digital age when ready-made images are available and at our disposal? For children, their everyday processes of living unfold in the reality they inhabit, a reality that is a seamless amalgam of natural and virtual environments. We think and feel through our experience of the physical world, which is mediated by our natural, perceptually-driven inclination to handle objects. Indeed, we think through our hands-on manipulation of the tools we have at our disposal to create visual, symbolic representations, whether through traditional or digital drawing media. Therefore, creative engagement with materials and specifically drawing “occurs as a continuum with normal processes of living” (Barrett & Bolt, 2013, p. 64), through which we come to understand better our world and ultimately ourselves (Gunduz, 2017, p. 36).

As the results of this study suggest, there is a need for drawing to be taught. Art educator Michelle Fava’s (2020) recent study explores the decline in drawing competence at the collegiate level in the UK in the context of digitization. Fava points out that while drawing as a means of representation is valued, it is no longer considered essential, whereas drawing as a critical thinking tool is increasingly being recognized for sparking innovation, yet the requisite skills are not being taught. Fava explains that the apparent decline in drawing skill is less a result of new technologies than a pedagogical imbalance between school and university levels. These results certainly speak to the findings of my own study and indicate a need for a revival of drawing being taught as a process, consistently throughout students’ educational careers.

Drawing as a medium of thought also connects with the work of Kress and Van Leeuwen (2006) for expanding visual modes of disseminating information. With drawing used as a means for teaching writing in most elementary classrooms, inquiries into meaning-making through signs and how children use images to communicate, particularly at the elementary level, could be key in opening potential new possibilities for curriculum and literacy.

In addition to how children navigate their living reality, central to this inquiry is how this experience is made visible in their drawings and what their interest in making drawings means to them personally and culturally. The other day a student eagerly explained his drawing to me, a map of the dangerous stuff in his Lego game and the safety gates he had created, where the skeletons can't get in, so that he could escape the monsters that were chasing him. The process of creating this drawing encompasses imaginative play, intermediary space, personal and fictional narrative, and culture, specifically video game culture. What also makes this exchange noteworthy is how Legos, a toy designed for building physical structures using plastic pieces, has bridged the natural and virtual worlds in video games as well as in movies. During art that day, this was his story that he felt compelled to relate to me, about his favorite game and the pride he felt in having invented his own solution to the "imaginary" threats he encountered in the video world. Further investigation into how and why children use images to communicate could prove vastly beneficial to how we approach educating children.

Conclusion

Reflective Critique

A critical appraisal in reflection upon this study about what I would have done differently begins with the drawing tasks. I would have devised three drawing challenges that give participants a choice among more universal and local media imagery for representation. For example, a drawing sequence could include self-portrait drawing from observation, memory drawing as a YouTube, TikTok, or other social media personality, imagination drawing of media star self in the role of helping the community. I would at the very least compose a scoring protocol using the same criteria for all drawings plus provide for opportunities to do more theoretical sampling in the research design.

However, I would prefer to dispense with scoring altogether and use video, narrative, and a performance ethnographic approach. Also, I would have created an online format for worldwide participants, interview participants directly, and use a questionnaire to survey personal media usage.

Closing Thoughts

This paper began with a prehistorical account of when cultural exchange of information, symbolic representation, was supported foremost with graphic production rather than verbal communication. Appraising cognition as a fundamentally cultural process, we might consider ourselves as participants in socio-cultural systems, who are essentially symbol manipulators, creating symbolic structure for ourselves and one another (Hutchins, 1995).

I remember my high school art teacher saying that a bicycle is one of the hardest things to draw. I think of this when I do a lesson with my elementary school kids based on “Double Phantom,”¹ a sculpture by Miguel Luciano (2017). The sculpture is made from two 1952 Schwinn bicycles facing in opposite directions but sharing the same rear wheel in the middle. When the conversation starts to get quiet, I ask my students if anyone has learned how to ride a bike and if they can describe what it feels like to ride a bike. It is not long before someone says “freedom,” “independence.” This call for art educators to teach children how to draw is not about drawing in the bourgeois sense. This is about drawing as freedom to express your ideas independently—like riding a bicycle, once you have learned, you never really forget. The drawing process and skills developed become a reservoir of experience that you can call on always.

¹“Double Phantom / EntroP.R., 2017” by Miguel Luciano Made from the frames of two 1952 Schwinn Phantom bicycles, this work commemorates the year of Puerto Rico’s constitution and the beginning of its Commonwealth status. Unable to move forward without also going backwards, Double Phantom / Entro.P.R. embodies the current state of political dysfunction in Puerto Rico and the paradox of its colonial relationship with the United States (Luciano, 2017).

Ultimately the aim of this study is to inspire better teaching by examining the connections between the personal, social, and cultural phenomena that led to each child at the center of this inquiry within an environment that is local and yet global, in a world whose parameters are dynamically changing and in which visual fluency is increasingly becoming a necessary skill. A better understanding of the impact of the network of influences on children's artistic thinking and learning asks us as educators to consider if this is indeed the educational environment we intended to create and what alternatives should be implemented to better serve our students' educational and emotional needs; to insure the art studio classroom honors and supports the creation of visual, symbolic forms of expression that offer greater understanding and opportunities to create new meaning.

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Appendix A

Examples of the Participants' Drawings

There are three sets of participants' drawings in Appendix A representing each country: United States, Greece, and Ghana. Each set includes the same set of four drawings: a self-portrait from observation, a full body self-portrait from memory, a self-portrait of themselves transformed into a superhero using their imagination, and their superhero self in action.

United States participant 20



③ What is your super
 One of my super
 is cooking food
 can also unfree
 Why did you choo
 costume

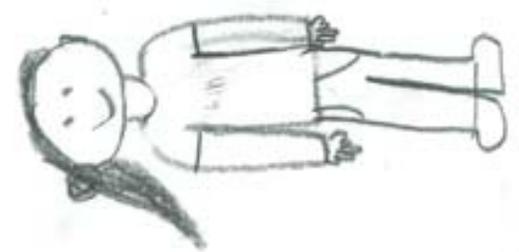
② I choosed my c
 because if ma
 my ~~costume~~ p
 and help me do sth
 where do you l

③ I live in a
 city Capatn
 with 4 oth
 super power
 friends.



②

Fire Girl



①



Greece participant 46



Η ΑΝΕΡΤΑ ΜΕ ΒΟ
ΥΑ ΠΕΤΑ ΚΑΙ ΑΝΟΤΑ
ΑΚΟΥ ΒΟΩΤΟΥΝ ΔΕΙΞΕ
ΤΕ ΠΙΑΤΙ ΜΕ ΤΙΣ ΕΙ
ΚΟΥΝΤΕ Ο ΚΙΜΑΤΟΣ ΕΧΙ
ΤΟ ΑΝΟΜΑΤΟ.
ΣΩ ΣΕΝΑ ΚΑΘΙ Ε
ΧΑΘΕ ΔΙΑ ΤΟ ΜΕΡΟ
ΤΟΥ ΚΗ ΟΡΟΓΑΤΕΣ.





Ghana participant 50



Super hero

My super power is love

costume

My costume is a cape

Save people

I save people to be free

Saving People

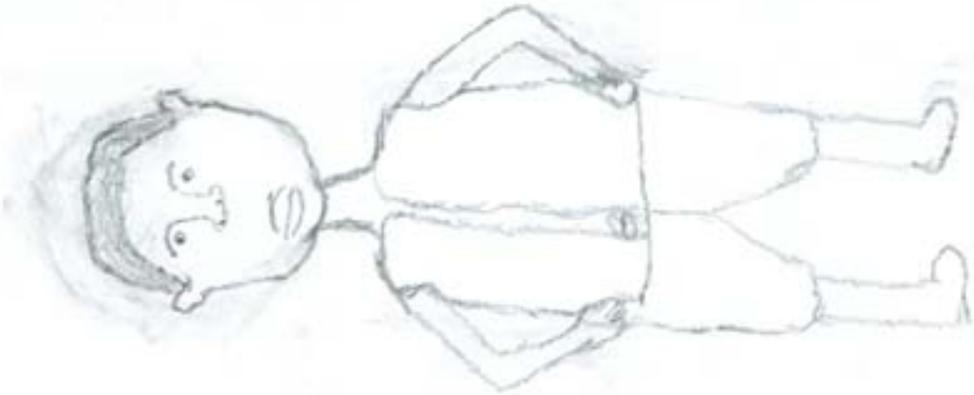
The people do

use fire to fire

and then peopoles

craying I come

off the fire





Appendix B
Questionnaires

Appendix B provides a sample of the participant's, teacher's, and parent's questionnaire.

Participant Questionnaire

Questionnaire for Students

Name _____
 How old are you? _____
 Where were you born? _____
 Where do you live? _____

I. About Art

Can you tell me about your favorite subject in school?

Is art an important subject of study for you and can you tell me why?

If you could, would you like to study art outside of school? Can you tell me what?

If you could learn anything about art what would you like to learn?

Please tell me what you think is a work of art?

Do you make art at home? What kind of art do you make?

Does anyone in your family make art? Can you please tell me who makes art in your family and what they make?

Where are you likely to see art? What do you see?

II. About You

Who are you?

How would you describe your personality? You may choose to use words from the list below.

Circle all that apply.

imaginative, sensitive, shy, outgoing, tough, gentle, stubborn, obedient, leader, follower, adventurous, cautious, studious, religious, accepting, questioning, self-motivated, lazy, hard-working, impulsive, cautious, playful, quiet, funny, serious, loner, social

What is your strongest characteristic? Can you please tell me about it?

What do you really like about yourself? How might I know this?

What do you think might be a weakness in your character, something you would like to improve?

How do you think other people see you or would say about you?

Is there anything else about yourself, something special that you would like to share so that I could get to know you better?

What are your favorite things to do?

What are your favorite things to eat?

What is the most important thing to you?

If you could change one thing in your life, what would you change?

What would you like to become when you grow up?

III. Things You Like To Do

What do you do when you are not in school? You may use the list below. Please tell me as much as you can about each of the following:

socializing with friends

listen to music / make music

dancing

games

make art

sports

family outings, vacation, visit family/ friends

homework

computer

reading for pleasure

church or other religious based activities

holiday celebrations (religious, traditional, national)

television

chores

work

How often do you watch television and what sort of television programs do you like to watch?

What is your favorite program to watch on TV? Can you tell me why?

What is your favorite commercial and please tell me why?

What is your favorite movie? Would you please tell me about it?

What is your favorite song? Could you please tell me who sings it and why you like it?
Where do you hear it?

Please tell me what you use the Internet for and how often?

Could you tell me about what you use Facebook for and how often?

Please tell me about what you use a cell phone for and how often?

How often do you play video games and where do you play? Who do you like to play with?

Would you tell me about your favorite video game please and why you like it?

Teacher Questionnaire

Questionnaire for Art Teachers

General

What is your name?
 Where are you from?
 Do you come from a low, middle, high-income family?
 What religion are you?
 What is your educational background/degree?
 What subject(s) do you teach?
 How many years have you taught?
 How many years have you taught at this school?
 Do you have another job?

What would you consider to be a work of art?
 Do you make art? What?
 Does anyone in your family? What? Where? How?
 Do you see art in your daily life? If so, where?
 Do the students see art in their daily lives? What? Where?

National Educational system

What 3 words come to mind that describe the educational system in your country?
 What are some of the strengths of the educational system particularly at the elementary level?
 What are some of the weaknesses of the educational system?
 What would you say is an area that needs the greatest improvement?
 How would you describe the quality and availability of educational materials and resources here?
 What technology, if any, do you have here at the school for educational purposes?
 Could you describe your behavioral management system and how and why you might use it in your classroom?

Network of influences

What influences do the students encounter in school and in their daily lives that might shape their sense of self, who they are, identity?

peers/ friends
 youth society/ youth culture?
 media: television, movies, magazines, advertising, other
 social media: email, Facebook, Twitter, Skype, Whatsapp, other
 video games
 cell phone/ texting

schooling/ education
 cultural traditions
 religious beliefs

What influences might play a role in a child's artistic expression- artwork and creative thinking?

Do the students watch television? What do they watch? In your opinion, does what your students watch on TV have any effect on them? What are some examples?

Do the students play video games? What games do they play? Do the video games they play have any effect on them? Could you describe this?

Do any of your students have access to the Internet and if so, what do they use the Internet for and how might this interaction affect them?

What do the students do during their free time?

listen to music
 dance
 make art
 sports
 family outings, vacation, visit family/ friends
 homework
 computer
 reading for pleasure
 church or other religious based activities
 holiday celebrations (religious, traditional, national)
 socializing with friends
 television
 work
 chores

Representation of the human form in your country

- Is there a strong figurative tradition?
- What are the children likely to have seen (arts)?
- What other arts/crafts would they have seen?

How is the human form/body represented in art and in various art forms in popular culture in your country?

Is the representation of the human form of particular importance in traditional artistic expression? Why?

How is/was the human form/body represented in art and in various art forms in traditional culture?

What, if any, traditional representation of the human form is carried on or evident within the culture today?

Parent Questionnaire

Questionnaire for Parents

Name _____
 How old are you? _____
 Where were you born? _____
 Where do you live? _____
 What is your educational background? _____
 What is your occupation? _____

I. About Art

Did you study art in school? If so, could you tell me what you studied?

Your child studies art in school. Could you tell me about what he/she learns in art class and how valuable you feel this is for your child?

If your child were to study art outside of school what might you like for he/she to study?

What is a work of art in your opinion?

Do you make art? If yes, would you please tell me about what you create?

Does anyone in your family? What? Where? How?

Do you see art in your daily life? Where for example a book, a gallery, a museum?

Does your child see art? What, where?

Does your child make art outside of school? What?

II. About Your Child

1. As a parent, what do you think might have an influence on your child? Circle as many as you think apply. How and to what degree? For each that you circle please explain.

peers/ friends

youth society/ youth culture?

media: television, movies, magazines, advertising, radio, other

social media: email, Facebook, Twitter, WhatsUp, other

video games

cell phones, texting

schooling/ education

cultural traditions

religious beliefs

2. How would you describe your child's personality? What 3 words come to mind?

You may use the list below.

imaginative, sensitive, shy, outgoing, resilient, tough, stubborn, obedient, leader, follower, adventurous, academic, religious, agnostic, accepting, questioning, self-motivated, lazy, caring, thoughtful, hard-working, compliant, impulsive, cautious, playful, quiet, funny, serious, loner, social

3. What are his/ her most outstanding qualities or characteristics?

4. What occupation would you like your child to have when he/she grows up?

5. What does your child do during his/ her free time? Please circle as many as apply and explain.

listen to music

dance

make art

sports

family outings, vacation, visit family/ friends

homework

computer

reading for pleasure

church or other religious based activities

holiday celebrations (traditional, religious, national)

socializing with friends

television

work

chores

III. About You

6. Do you have a television? How many?
7. Do you have a satellite dish?
8. How often do you watch television? With whom?
9. What programs do you watch on television?
10. Which is your favorite program? Why?
11. Where are they made, from which country?
12. Do you watch DVDs? What do you like to watch?
13. Do you have Internet access? Where? How often?
14. What do you use the Internet for?
15. Do you have a Facebook account?
16. What do you use it for the most?
17. Does your child use it? How often? Who do they connect with?
18. Do you have a cell phone? How often do you use it? What do you use it for? Does your child use it?
19. Do you play video games? Where, how?
20. What is your favorite? Why?

Appendix C

Example of Protocol and Matrix Charts

Protocol Chart

This is an example of the protocol chart, one for each participant making a total of 72 charts used by each of the three judges for scoring the sets of drawings.

Set 1 a= self-portrait <input type="checkbox"/> b= triptych <input type="checkbox"/> c= action drawing <input type="checkbox"/>	self-portrait	full self-portrait (left of triptych)	superhero-self (center triptych)	superhero self in action drawing	action drawing in entirety
1. Schematic (using graphic symbols)					
2. Naturalistic (realistic representation)					
3. Mixed (schematic and naturalistic)					
4. detail: insignia					
5. OTHER					
6. Assured/Hesitant: A/H					
7. figure in proportion Y/N					
8. drawn in contour Y/N					
9. composed as parts Y/N					
10. Face/Body in profile F/B/FB					
11. detail-insignia: Memory/Observation/ Imagination/Combo M/O/I/C					
12. Weapons or Gadgets W/G					
13. OTHER					
14. stick figures					
15. super/magical powers					
16. shows saving and helping people					
17. violence depicted					
18. use of symbolism, conventions, labels					
19. speech bubble/ text					
20. drawn in pencil and filled in with color					
21. drawn and retraced					
22. Action Localized/ Action Fills the page-touches edges AL/AF					
23. OTHER					

Matrix Chart

Matrix charts were organized and analyzed for trends by style profile, gender, and country.

participant	detail	1) super powers	A) regard for art
self			
full self		2) costume	B) self-image
super self			
action self		3) saving act/*residence	C) extracurricular activities
action			

Appendix D

Frequency Count Score Charts

These charts show the raw scores from the judges for each drawing task with Y, Y2, and Y3 indicating the number of judges who marked a criteria present.

