The Role of Perception in Age Estimation

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Abstract. Law enforcement is increasingly called upon to investigate child exploitation crimes, a task that involves the important task of estimating the age of depicted children. There is limited research into our ability to perceive adult versus child and to more specifically estimate the age of a child based upon an image. There are few training programs available and lack of uniform methodology for child age estimation. A more stable foundation can be found through input from multidisciplinary fields in science and Art. The results of surveys and review of multidisciplinary literature indicate that the human ability to perceive the difference between juvenile and adult is a not just a matter of common sense, but a hardwired, preconscious condition of human experience based upon perceptual cues, and further, indicates a normative ability to make reasonably accurate age estimations based upon facial features and proportion when provided with an evaluative framework.

Keywords: Child sexual abuse images, child pornography, age estimation, computer forensics, digital forensics, cyber crime investigation, child exploitation, law enforcement, perception.

1 Introduction

The Internet and digital photography technologies have played a significant role in the proliferation and availability of child pornography[1] and in the increasing number of child exploitation investigations. As a consequence, law enforcement investigators including digital forensic examiners[2] are increasingly tasked with investigating and assisting in the prosecution of these crimes. The ability to estimate of the ages of unidentified children depicted in illicit media is an important, understudied, and challenging area of consideration.

During the investigation of child pornography cases, investigators are often directly involved in the estimation of the age of child victims depicted in illicit media. In some cases, the identity of the child depicted in the sexually explicit media is known and estimation of the age of the depicted child is simply a matter of determining at what point during the child's life the media was created, and how old

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[1] The term "child sexual abuse images" is often considered a more appropriate reflection of the contents of the visual representations encompassed by the term child pornography because the term "pornography" insinuates the consent of the child/children featured in the visual representations.

[2] The terms forensic examiner and investigator are used interchangeably herein.

the child was when the media was created. When the identity of the depicted child is unknown, a two-pronged approach is generally undertaken during evaluation of the potentially illicit nature of the media, including first making an initial determination of whether the individual depicted in the media is a child or not, and second, determining an approximate age range estimate for the child. As emphasized by *Schmeling and Black* [1] "The definition of 'child' or 'minor' is important for prosecutorial purposes as it is not illegal to take, hold or share indecent images of consenting adults as long as they do not include a minor."

What constitutes child pornography in one jurisdiction may not meet the statutory definition in another jurisdiction based upon the age of the individual depicted, or upon other factors related to the content of the media. Forensic examiners are likely to be among the first individuals tasked with determining if a particular image or video fits the statutory definition of child pornography due to the nature of their work. Consequently, they are placed in the position of acting as a gate keeper to the criminal justice system when making determinations as to whether or not media includes an individual whose age fits their jurisdiction's statutory definition of 'child' or 'minor,' and thus if the subject media is illegal or not.

The weight of the gatekeeper role and responsibility upon the investigator should not be underestimated. There is an implicit understanding that misidentification of the age of an individual in a pornographic image or movie might ultimately result either in a guilty suspect going free or an innocent suspect being wrongfully prosecuted. In cases where the forensic examiner is also used as an expert witness to testify regarding their determination that the individual depicted is a child, or to give an age range estimate for the person in the depiction, the stakes are raised. No investigator wants to risk incorrectly identifying media as child pornography, both because of the resulting consequences for the accused, and the damage such a misidentification could cause to the investigator's professional reputation.

Two examples of young adult pornography actresses who have appeared in media mistakenly identified and charged as child pornography are Melissa Ashley [2] and 'Little' Lupe Fuentes[3]. Both actresses became involved in the adult pornographic film industry shortly after their eighteenth birthdays. Moreover, both have been called as defense witnesses in child pornography cases to refute erroneous charges. Conversely, before her true age was revealed, Traci Lords [4] became involved in the adult pornography industry at the age of 15 and was featured in over 200 commercially produced pornographic movies before her eighteenth birthday.

| Melissa Ashley [2] Born 24 Aug., 1978 | Lupe Fuentes [3] Born 27 Jan., 1987 | Traci Lords [4] Born 7 May 1968 |

Fig. 1. Examples of pornography actresses whose ages have been misidentified in child pornography cases

The actresses depicted in Figure 1 illustrate an inherent challenge faced by investigators when attempting to estimate the age of an individual depicted in suspect digital media; people undergo the process of physical and sexual maturation at different rates, with some displaying precocious sexual maturity and others appearing younger than they actually are. Additionally, according to Sun *et al.* [5] factors such as racial background and obesity may affect not only the age at onset of puberty, but also the visual markers of sexual maturity, further complicating the process of age estimation.

In the United States, as articulated by the Fifth Circuit Court in *United States v. Katz* [6] when the age of a child depicted in a charged media file is unknown, and investigators are unable to concretely establish the age of the depicted individual because the identity of the child is unknown, there are generally two options. The first option is to proceed without expert testimony on the basis that the trier of fact can examine the image and determine whether or not the individual depicted is a child. The second option is to have an expert assist the trier of fact by providing an estimate of age of the person depicted and explaining how their opinion was established.

Notably, as stressed by Cooper in addressing sexual maturation rating studies in the context of expert estimation of child ages for court purposes *"across each of the studies the findings were comprehensively consistent in the conclusion that all stages below B5, PH5, and G5 (on the Tanner scale) are consistently associated with children well below the age of 18 years old for nearly all nationalities [7]."* The findings of sexual maturation rating studies carry important implications for estimation of age range from digital media, as demographic studies support the finding that if an individual has secondary sexual characteristics consistent with less than full adult sexual maturation, they are highly likely to be under 18 years old.

Legal challenges related to the criminal investigator's ability to estimate the age of individuals depicted in images of child sexual abuse are common, even in cases involving depictions of obviously preadolescent children. An example typical of such defense challenges follows, as excerpted from the 2003 preliminary hearing in *State of Wisconsin vs. Gordon Sussman* [8]:

> **Defense Attorney:** *Do you have any medical training or special training in the area of pediatrics or child development?*
> **Forensic Examiner:** *I don't have any medical training except that which I received in the military and as a police officer. And, I am a mother.*
> **Defense Attorney:** *That's not what I asked. Do you have any specialized training in the area of pediatrics and child development?*
> **The Court:** *Ms. Prosecutor?*
> **Prosecutor:** *I object to that. Judge. It's just common sense. I don't think you need specialized knowledge to identify someone who is about six or seven years old. We do it every day in our lives. We're talking about prepubescent children.*
> **The Court:** *Mr. Defense Attorney, you did not ask if she had any training in identifying the ages of children, you asked if she had pediatrics training so your motion is premature at best.*
> **Defense Attorney:** *Do you have any training in the area of identifying the ages of children?*
> **Forensic Examiner:** *Yes, I do. I grew up with a professor in Biology. I studied some Biology in college, and again, I go to the fact that I am a mother. I've been*

around children for a long time. It's life experience. You can tell the difference between someone…

Defense Attorney: *I asked about training. Have you told me about all the training you had? You grew up with a professor in Biology. And did you obtain training by osmosis then? Do you have specific training about identifying the ages of children from photographs?*

Forensic Examiner: *No.*

Defense Attorney: *Now, your honor, I would ask that her conclusions be stricken.*

The Court: *It is an opinion that these images are of children. There are opinions that she is not qualified by training or experience to testify as an expert in that area. There are opinions that lay witnesses are entitled to give. I think that a layperson could certainly identify, can differentiate between a young child and someone 18 and older. To the extent that she testified that there are pictures of children as young as five, I think that she can give that opinion without expert credentials.*

As the prosecutor observed, it may seem that the human ability to differentiate between child and adult or to estimate the age range of a child to some degree of accuracy is a matter of common sense. Notably, there has been a recent trend towards defense attorneys arguing that if the prosecution finds it necessary to make use of an expert to provide an age estimation, the defendant should not be expected to have knowledge that the individual depicted was underage.

2   Supporting Information from the Field of Psychology and Perception

The roots of questions regarding human ability to distinguish between adult and child and to make estimates regarding the age of a child are grounded in psychology, and more specifically in field of perception. Perception is the process by which an organism attains awareness or understanding of its environment by organizing and interpreting sensory information [9]. The study of perception has shown that the brain's perceptual systems actively and pre-consciously attempt to make sense of input from the surrounding world. Perception also accounts for human ability to make visual sense of the world in three dimensions (depth perception), to interpret missing information from partial images, and to understand issues of perspective such as foreshortened objects or the apparent size difference in an object's dimensions over distance [9].

   One of the earliest descriptions of the effects of the perception of age on human behavior is the concept of *Kindchenschema* proposed by Konrad Lorenz in 1943 [10]. Lorenz documented the innate relationship between caretaking behaviors and a sentimental orientation towards infants that was found to be directly triggered by physiological features such as protruding cheeks, a large forehead, and large eyes below the horizontal midline of the skull [10, 11]. There are additional perceptual cues directly related to various stages of childhood development from infancy through adulthood which humans rely upon during the process of age perception and thus

during the process of age estimation. These cues include but are not limited to such characteristics as: body habitus and musculature [7, 11-13], height and weight proportion [7, 11-13], extremity length proportion with respect to torso [7, 11-14], specific dentition features [7,11,13], signs of sexual maturation [7,11,13], distribution of body hair [7,11,13], fat distribution [7,11,13], the center or midpoint of the body [11,14], proportion of the head compared to the body [11,13], proportion and position of facial features and shape of the head [12,13,16-21], skin, flesh tone and texture [7,11,16], voice characteristics [21], body coordination and control of movement [21].

In general, the perception of aging and maturation is universal and is the result of a natural, pre-conscious assimilation of the cues listed above in combination with other environmental factors. It is within the collective human experience to be born, to experience childhood, to mature through adolescence, and to grow into adulthood. It is also within common human experience to observe the process of human maturation as it occurs in others around us: among our peers, members of our family, and in our community.

There is evidence that the ability to perceive the difference between adults and children is in fact, innate. Bahrick *et al.* found in *Intermodal Perception of Adult and Child Faces and Voices by Infants* that "infants demonstrated the ability to match the faces and voices of children and adults of the same gender" at as young as 4 months old. Other research in the area of perception among infants has shown the ability of infants to distinguish between gender in adults, to distinguish between mother and stranger, and increased stranger anxiety in infants towards adults versus children [21].

More recently, in their 2008 study of parental instincts, researchers Kringelbach and Stein showed through use of brain imaging techniques that a brain region associated with emotional responses to rewarding stimuli is activated within a seventh of a second in response to pictures of babies, but not in response to images of adults. Dr. Kringelbach commented on the findings of the study stating, "These responses are almost certainly too fast to be consciously controlled and so are probably instinctive [22]."

Additionally, the process of aging and maturing, while it can involve considerable individual variation, follows certain general fixed conventions that act as perceptual cues towards the discernment of perceived age. The aging process is continuous; the aging process is sequential in nature; and the aging process causes predictable physical changes that are clustered around defined periods of life.

The ability of people to accurately make age estimates for adult faces has been relatively widely studied. According to Rhodes in his 2009 literature review *Age Estimation of Faces: A Review* "when examining only data reported for faces that have not been manipulated or transformed in any way, one finds that age estimates can be fairly accurate when judging a diversity of age groups [19]. For example, Burt and Perrett (1995) had younger and older adults make age estimates for color photographs of individuals aged 20 to 54. *Results showed that estimated age deviated only slightly (2.39 years)* from the actual ages of the individuals in the photographs. George and Hole (2000) and Sórqvist and Eriksson (2007) have reported similar levels of accuracy, with *deviations from actual ages on the order of approximately 3 and 4 years, respectively*.

In 2007, as part of their research in the area of machine learning and computer automated age estimation, Ging *et al.* conducted a small-scale study of the baseline, untrained human ability to accurately estimate the age of people depicted in images

based solely upon facial characteristics displayed in both color and black and white facial images. Among the outcomes of this study described in *Automatic Age Estimation Based on Facial Aging Patterns* was the concept of "Imbalanced Age Estimation [20]*."* The researchers noted that young faces change at a faster rate than older ones, and that consequently age estimation is more prone to error at older ages both by computers and by humans. In other words, they found that *untrained observers were better able to accurately estimate the ages of younger individuals depicted in facial pictures than of older individuals.*

Kazuya *et al .*in their paper *Semi-Supervised Estimation of Perceived Age From Face Images* posited that human age perception is heterogeneous in nature: "it is rare to misjudge the age of a 5-year-old child as 15 years old, but the age of a 35-year-old person is often misjudged as 45 years old [23]." Significant to the topic of child age estimation, this is a restatement of the concept of Imbalanced Age Estimation; that young faces change at a faster rate than older ones [20].

In 2009 Cattaneo *et al.* attempted to address the shortage of research specifically related to age identification in child pornography cases in a small scale study summarized in their paper *The difficult issue of age assessment on pedo-pornographic material* [15]. The study was conducted using the following methodology:

"11 photos of 11 females were taken from official authorized pornographic websites where the ''actresses'' were known and of adult age. On every photo, the observer/examinee (who was unaware of the girls' age) was asked to establish if each girl was underage (18 years was selected in this trial) or adult, specifying which particular anatomical element suggested the choice (face, breast, pubic hair, other). The photographs were the object of the same study both in Germany and in Italy. In Italy the test was subjected to groups of five observers belonging to three different medical specialist categories: forensic pathologists, pediatricians, gynecologists, all of experience. Another group, used as a control group, was composed by 13 non-medical specialists (laymen); in total, the subjects who underwent the test were 28. In Germany the exact same study was performed, with the same number of laymen and of forensic pathologists. The number of gynecologists and pediatricians was slightly lower, for a total of 23 examinees[15]."

Founded upon the above methodology, the authors report that there was a similar outcome observed in both Germany and Italy: "All classes performed poorly". Built into this study, however, is *inherent bias* that among the photos presented to the test subjects were included images of children, when in fact *none* of the included pornographic images were of children. This internal bias should be expected to elicit false positive results as the participants are asked to identify the subjects in the images as underage or adult thus providing the false perception that at least some of the included subjects in the images were postpubertal children. The authors of the study concluded their findings "prove the inadequacy of the use of visual and other morphological parameters as criteria for aging suspect juvenile pornographic material in the postpubertal stage.[15]" The authors conceded that their study "does not aim to prove that juveniles represented on photographs cannot be set into general age ranges, or that pre and postpubertal ages cannot be distinguished – on the contrary these types of diagnoses in fact can be performed at times... This study actually aims at stressing the problems and dangers associated with the postpubertal/sexually mature stages... which most late teenagers and late adult women share [15]."

3   Age Estimation Surveys

As previously noted, there is limited research regarding the evaluation of human ability to distinguish between adults and children based upon digital images, how accurate we are in our perceptions of the age of children, or at what point in the physical development of a child it becomes difficult to gauge whether the depicted individual is an adult or a child based upon an image. In an attempt to address these questions, two Internet based surveys were developed and deployed.

The first survey was designed, to determine the normative ability[3] of respondents to establish the difference between adult and child when presented with abstracted examples of depictions of adults and children from media, the art world, and everyday representations, and to determine the normative ability of respondents to arrange facial pictures of children with two distinct racial backgrounds into correct age order. The second survey was designed to attempt to determine the normative abilities of respondents to identify adult versus child based on non-pornographic photographic images, and to subsequently determine the normative abilities of respondents provide age estimations of the individuals within those images based on a given set of instructions for age estimation.

3.1   Survey #1 – Perception of Adult vs. Child and Child Age Progression

The first survey was started by 191 respondents[4] and was finished by 180 respondents, for a 94% completion rate. The eleven incomplete surveys were not used in the final analysis. Fifteen respondents started and completed the survey but skipped questions, and their responses were therefore not considered in the overall results. A total of 165 of the original 191 surveys (86% of respondents) were further analyzed.

In the first study, respondents were presented with abstracted images depicting children and adults from the art world and from everyday objects, and were asked to identify whether the images depicted adults or children. For example, when presented with images shown in Figure 2 from the television shows "The Muppets" and "Muppet Babies" and asked to identify the characters as adults or juveniles, 93% of respondents identified the pictures of adult Muppets as adults and 100% of respondents identified the more youthful portrayal of Muppet Babies as juvenile. Given even fewer visual cues, with just a silhouette, the vast majority respondents were able to distinguish between adult and child in the Major League and Little League Baseball logos shown in Figure 3.[5]

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[3] For the purposes of this paper, normative ability is defined as the average or expected ability to estimate age range based upon the mean age range estimates of survey respondents.

[4] Respondents for both surveys were made up of individuals from various professions. Many respondents were members of law enforcement, digital forensics and network security list serves. The surveys took an estimated 20 - 45 minutes to complete and were done on a voluntary basis.

[5] It is acknowledged a respondent's personal experience with the characters represented in the images and who are aware the context surrounding the images may have identified the images as adult or child based upon their personal experiences in conjunction with perceptual cues of proportion.

| Adult: 0   Juvenile: 165 (100%) | Adult: 153 (93%) Juvenile: 12 (7%) |

Fig. 2. Identify Adult versus Child - Muppet Babies versus Adult Muppet characters

| Adult: 162 (98%)   Juvenile: 3 (2%) | Adult: 5 (3%)   Juvenile: 160 (97%) |

Fig. 3. Identify Adult versus Child- Major League and Little League Baseball logos

The television, movie, and advertising industries have a savvy awareness of market demographics, and of viewer psychology and perception. Though the puppet and cartoon characters are obviously not human, their facial characteristics and proportions, body proportions, and other visual cues allow viewers to distinguish the characters as either adults or juveniles based upon visual cues, and with television upon additional audible cues.

This is an image depicting a child sitting on an adult's lap. How accurate do you think the depictions of the adult as an adult and the child as a child is, and why?

Not Accurate: 149 (90%)

Accurate: 16 (10%)

Fig. 4. Enthroned Madonna & Child 13th Century. Wood [26].

Respondents of the first survey were additionally presented with an iconic Byzantine image of the Madonna and Child, shown in Figure 4 and were asked to evaluate whether or not the depictions of the adult and child were accurate, and why. The vast majority of respondents identified the adult as an accurate depiction but the

child as inaccurate based upon the physical proportions of both. In explaining the inaccuracy of the child's depiction respondents described the child as looking like a miniature adult, both in facial and body proportions. Interestingly, several of the respondents who answered that both images were accurate qualified this assessment by stating that the child, though having adult-like features and proportions, was depicted that way by the artist to show that the son of God was not truly a child.

Survey 1 respondents were also presented with two separate series of images as shown in Figure 5 and Figure 6 of two children, one of Caucasian descent, and the other of Asian/Irish descent. The series' included five facial images of each child taken at various ages between 6 and 17 years of age. Respondents were asked to place the images in age order from youngest to oldest.
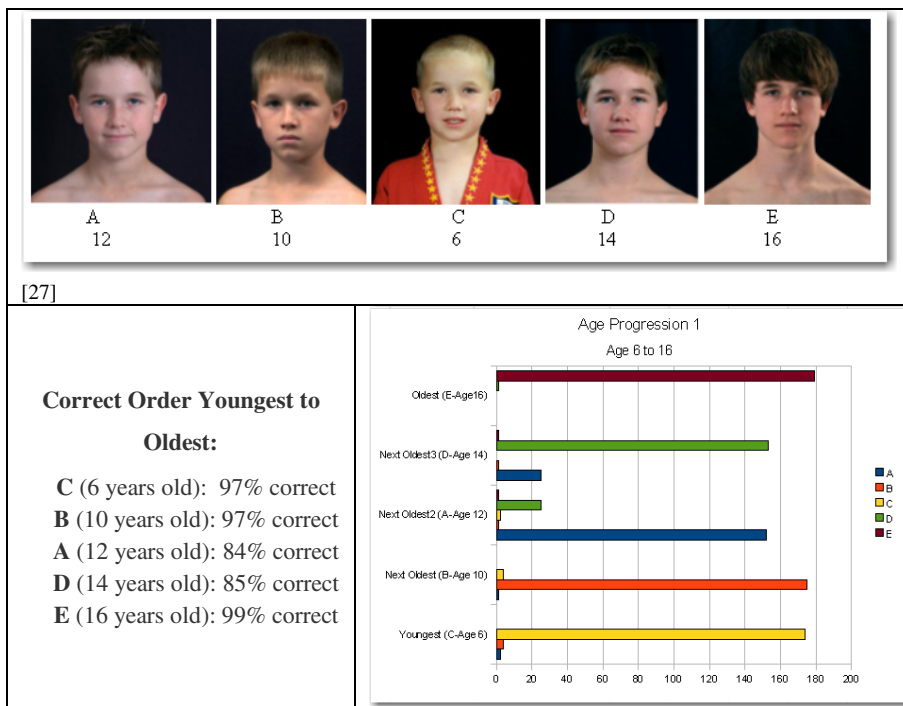

Fig. 5. Place images in order of age, youngest to oldest

The survey results indicate that the respondents had significant ability to successfully place the images in correct age order. Respondents who commented on the cues they used to make determinations about age order cited the width of the shoulders as well as size and proportion of facial features as being the main cues they relied upon when determining the order in which to place the images.
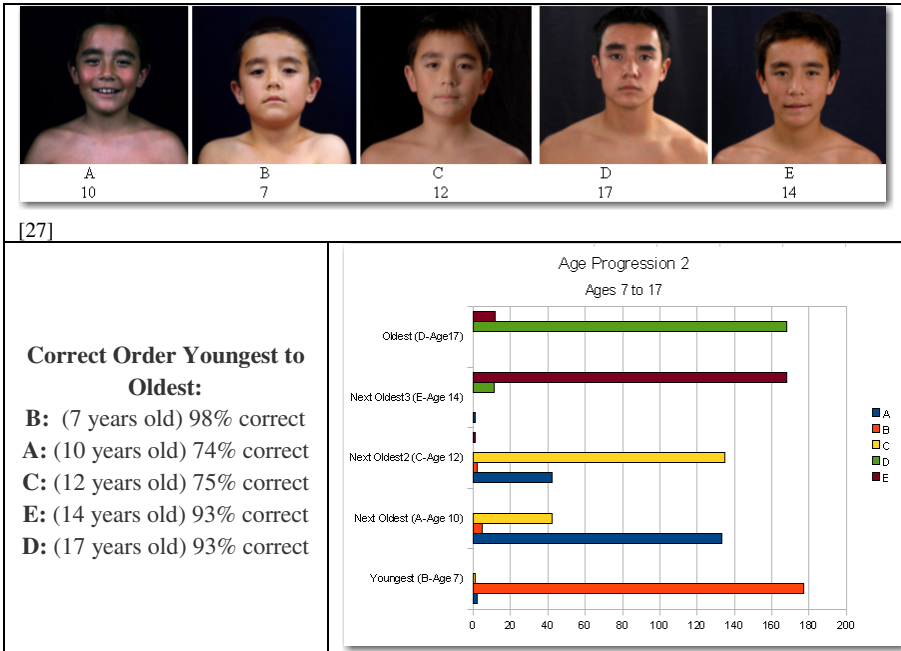
Fig. 6. Place images in order of age youngest to oldest

3.2   Survey #2 – Distinguish Adult vs. Child and Age Estimation from Images

The second survey was started by 177 respondents and was completed by a total of 143 respondents, for an 83% completion rate. The 34 incomplete surveys were not used in the final analysis.   41 respondents started and completed the survey but skipped questions within the survey and those surveys were therefore not considered in the overall results. A total of 102 of the original 177 surveys (57% of respondents) were further analyzed. Survey respondents were asked to make two determinations about each of 47 images including whether based on their first impression, they thought the individual in the image was an adult, a child, or whether they were unsure; and second to estimate a three-year age range for the individual depicted in the image. The images used in the survey were mostly of children and young adults ranging from infant to 19 years of age, of both genders and a variety of races. Images of two 25-year-old adults were included to prevent respondent perception that all images were of children. In order to encourage careful consideration of age range estimates, respondents were given the following directions regarding how to make their estimations as follows:

1. Roughly estimate a three-year age range based upon your first impressions of the image. Take the top age in the estimated age range and add three years to that age. Then ask yourself "is there a possibility the person is that age?"
2. Next, take the bottom age in the range and subtract three years. Then ask yourself "is there a possibility the person could be that age?"

3. If your answer is "no" to both of the above questions, keep the initial age range estimate as your answer.
4. If the answer is "yes" to either of the above questions, adjust your three year age range estimate up or down accordingly.

Overall, survey respondents were quite accurate in their determinations as to whether the depicted individual in any given image was an adult or a child. Predictably, the level of accuracy in determining whether the depicted individual was an adult or child decreased somewhat as the individuals in the images reached adolescence, and was further diminished as the depicted individuals approached adulthood. Age range estimations were also quite accurate, with mean age estimates generally falling within one to three years of the child's actual age, a result similar to age estimation study reviews by Rhodes[19] and research by Geng [20] and Kazuya [23].

Subject #	Actual Age	Mean Age Estimate	Sex		Subject #	Actual Age	Mean Age Estimate	Sex
1	0	1.42	F		25	10	9.47	M
2	0	1.6	F		26	11	13	F
3	1	3.67	F		27	12	11.03	M
4	1	1.6	M		28	12	12.31	M
5	2	3.49	M		29	12	13.45	M
6	3	3.03	M		30	13	16.34	F
7	3	3.53	F		31	14	19.49	M
8	4	6.4	F		32	14	13.89	M
9	4	5.77	F		33	15	18.5	F
10	4	5.68	M		34	15	13.97	M
11	5	4.59	M		35	15	14.02	F
12	5	6.14	F		36	16	15.72	M
13	6	5.78	F		37	16	18.2	F
14	6	7.9	F		38	17	18.04	M
15	6	6.89	F		39	17	17.87	F
16	8	7.75	M		40	17	16.3	F
17	8	9.6	F		41	17	17.88	M
18	8	8.76	F		42	18	17.56	F
19	8	7.25	M		43	18	15.96	M
20	9	9.4	F		44	18	18.86	F
21	9	10.24	M		45	19	18.29	F
22	9	11.99	M		46	25	25.98	M
23	10	10.4	M		47	25	20.74	F
24	10	11.78	M					

Fig. 7. Results of Age Estimation Survey #2

For the majority of the images from the survey, mean age estimates for the individuals aged between infant and 18 were higher than the depicted child's actual age – in other words the child's age was over estimated on average by respondents, a result that appeared consistent across race and gender.[6] However, as the individuals depicted in the images approached and reached the age of eighteen, there were two

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[6] For the youngest subject images, overestimates may be due to the design of the instructions as when a three-year estimation range is applied to an infant the scale is skewed upwards to 0-3.

cases where on average, survey respondents underestimated the age of the pictured individual. Figure 7 is a summary chart reflecting the actual age, mean estimated age, and sex of each of the subjects in the survey images. The actual and mean estimated ages of each for each of the survey images were plotted on a summary graph shown in Figure 8. The graph illustrates the relative difference between the child's actual age and mean estimated age for each subject image. The wider the spread between the mean estimated age and actual age, the more difficult it was for respondents to accurately identify the age of the individual in the image. The images used in the survey are included survey order in Figure 9 and Appendix A contains source and image identification information.

Based upon facial and body proportions, and without those cues of secondary sex characteristics such as pubic hair that can only be clearly visualized in nude images, respondents appeared to have a good normative ability to place subjects within an accurate age range estimate. For the purposes of a criminal investigation however, overestimation of an unknown victim's age is clearly preferable to underestimation of an unknown victim's age, especially when the upper end of the estimated age range reaches the statutory definition of adult, in order to avoid mistakenly charging a pornographic image of an adult as child pornography.

Based upon the preponderance of information from the two age estimation surveys and previous research in the area of facial age estimation and sexual maturation rating
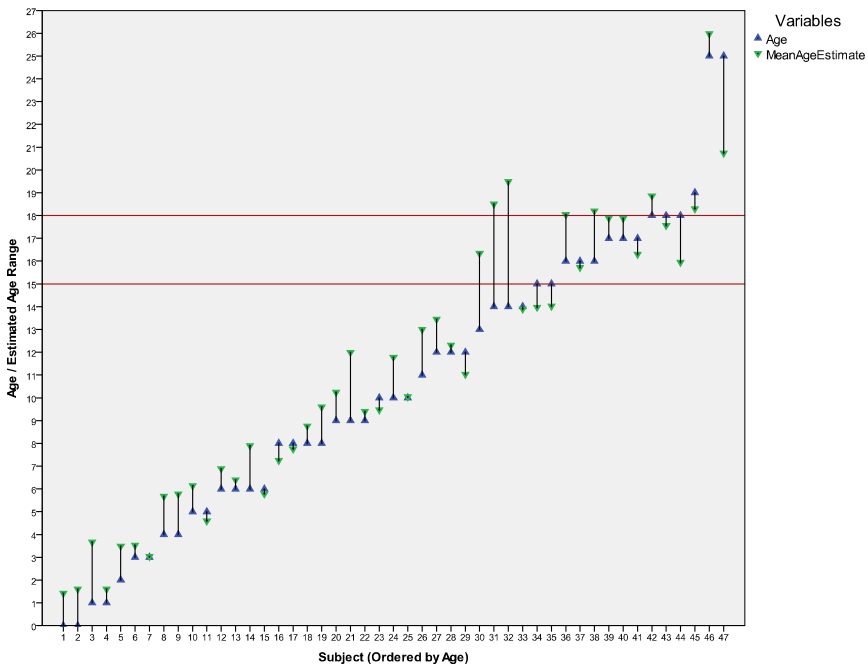

Fig. 8. Results of Age Estimation Survey #2

studies, some fairly common sense recommendations can be proposed for investigators and forensic examiners regarding age estimation of unknown victims in illicit images and videos. First and foremost, if the examiner has any doubt about whether the individual depicted is a child or an adult, they should rely upon their perception and move on to another image. If the examiner has doubt that the individual is underage, that doubt *is reasonable doubt* and the image should not be considered for criminal charges. Conversely, if the investigator perceives that the individual depicted in an image or video is a child, based upon the visual and other cues presented within the media, the individual is highly likely to in fact be a child, and the estimation technique described herein can be utilized to determine an estimation of the age range the child falls within.

The results of the surveys, in combination with results of research and literature from the field of perception, artificial intelligence, and sexual maturation rating studies support the assertion that the human ability to perceive the difference between juvenile and adult is a not just a matter of common sense, but rather is a hardwired, preconscious ability based upon perceptual cues. Additionally, the results indicate a general normative ability to provide a reasonably accurate estimation of age based upon facial features and proportions when participants are given an evaluative process to follow, as well as providing information regarding the approximate age at which the ability to distinguish between adult and child becomes difficult.
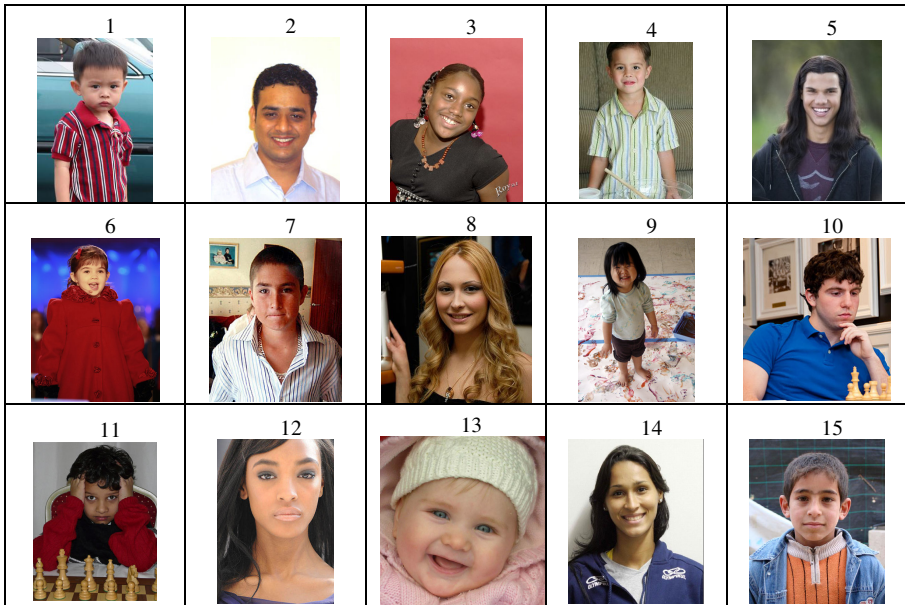

Fig. 9. Images used in Survey #2 in order of appearance in the survey

Fig. 9. (*Continued*)

Appendix A – Survey Image Identifiers and Sources

Subj. #	Survey#	Image Source:
1	13	http://www.dailycuteness.com/cute-baby-Female.html
2	36	http://2.bp.blogspot.com/_8qRRG_WD2mk/STvHbG6ww6I/AAAAAAAAAjc/hcQGtsMrN3Q/s400/black+baby+girl.jpg
3	9	www.greatsociety.com/images/staff/scott_tian.jpg
4	24	http://web.mit.edu/cre/alumni/i/MargaretWagner%2705_new-son-Jack.jpg
5	1	http://cdn.calisphere.org/affiliates/images/csta/kt6v19p65d/webfullsize/11479893.jpg
6	43	http://a123.g.akamai.net/f/123/27511/5m/wfmzimg.dayport.com/img/tn_7-9-08-strickland.JPG
7	26	http://www.theage.com.au/ffximage/2008/05/05/demi_bresnehan_narrowweb__300x450,0.jpg
8	29	http://shanghaiist.com/attachments/ISpyShanghai.com/underage-chinese-gymnast.jpg
9	6	http://www.chinadaily.com.cn/showbiz/images/attachement/jpg/site1/20081205/00221917dec40aa2c21b06.jpg
10	4	http://steamykitchen.com/wp-content/uploads/2010/04/no-knead-bread1.jpg
11	37	http://images.huffingtonpost.com/2009-10-16-boy.JPG
12	23	http://farm4.static.flickr.com/3144/3063416398_fbdbff4179.jpg
13	47	http://img.dailymail.co.uk/i/pix/2007/06_02/connietalbot1306_486x672.jpg
14	40	http://fiftyrefugees.files.wordpress.com/2007/07/na.jpg
15	21	http://i.factmonster.com/images/australian-student.jpg
16	17	http://images.askmen.com/blogs/news/try-children-as-adults.jpg
17	44	http://www.boomsmith.com/images/Holly%20in%20pajamas%20with%20her%20boomerang.jpg
18	32	http://www.callingtheopera.com/images/MadisonPappasCrop.jpg
19	11	http://www.chessbase.com/news/2007/wycc/player025.jpg
20	38	http://www.worldofstock.com/PCH2139.jpg
21	18	http://www.yannickkoffi.com/Articles/377/Large-53495632-31a4-4f60-bd32-6cc40acc46d9.jpg
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