Revealing Bodies Temporary Exhibition

Front-End Study

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March 1999
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During February and March 1999, Sue Allen and Terre Lodgson (interning at John F. Kennedy University) carried out a front-end evaluation study to inform the Body Project (later resulting in the Revealing Bodies temporary exhibition). The project was internally funded by the Exploratorium.

Goals of study

The purpose of the interviews was to inform the team about:
• visitors' degree of comfort or discomfort with detailed images of the human body. For example, we showed visitors images that include detailed human dissection, depictions of naked humans, and other potentially sensitive images.
• visitors' own questions about and interpretations of the kinds of images we plan to use.
• visitors' degree of familiarity with the theme of the exhibition: that body imaging technologies have an impact on how we see ourselves.

The interviews

Choice of people to be interviewed:
We interviewed a total of 26 adults (12 males and 14 females) visiting the Exploratorium. Most of the interviews were conducted on weekends, but 4 were interviews with teachers visiting on weekdays with student field trips. Visitors were approached as they sat on benches around the museum. All interviews were conducted with individuals. Selection of visitors was not random; rather, we tried to interview the largest available range of visitors, based on our estimates of age and cultural background. Because of the controversial nature of the images, we did not approach families sitting on the benches with young children. However, it was not unusual for small children who had been playing with exhibits to run up and join the adults being interviewed. In several cases, the adults invited the children to respond to the images as well; if this happened, we recorded the children's responses to the adults' questions.

In addition to the adult visitors, we conducted interviews with two groups of high school Explainers, each having 10-12 participants. One group was asked to write individual responses to the questions in the study; the other group was asked to respond to the questions verbally and as a group, while the interviewer wrote down the things they said.

Context of interviews:
At the start of the interviews, visitors (or Explainers) were told:
• the images are for possible inclusion in an upcoming exhibition.
• what the exhibition will be about: "different techniques for making images and pictures of the human body, and how those pictures affect the way we think about our bodies."
• that the images they are about to see may be "challenging or difficult to look at."

Images shown:
We tested a total of 10 images, but each person was shown only 3, so as to keep the interviews to reasonable length. Each person saw a different set of 3 images, so as to mix up the patterns of responses. On two occasions, visitors asked to see more of the images; in these cases, we wrote down their responses to all images they had seen and included them in the data set.

Other questions
After showing visitors the individual images and hearing their detailed responses, we asked them several overview questions about the whole set of images. These had to do with how challenging the images had been, their appropriateness for audiences of children and adults, and general questions relating to the theme of the exhibition.

Although the interviews were not times, we estimate that they took between 10 and 30 minutes; the longer interview times represent cases where visitors wanted to see more images, or had a lot to say about the questions asked. Our general impression was that most visitors felt comfortable and took their time in answering the questions. Nobody who agreed to be interviewed terminated the interview before the end, in spite of its length, and nobody terminated on being told that the images might be difficult or disturbing to look at. There were 10 refusals by visitors; the most commonly cited reason given (by 6 of the 10) was that they were about to leave or didn't have time.

The complete interview form, and copies of the photographs, are given in Appendix A.

Overview of results
What follows is a subjective summary of some of the stronger themes that we felt emerged from the data. We only rarely give numbers of visitors giving a particular response because the sample is not quantitatively representative of the visitors. However, we felt that it might be helpful to provide a summary (albeit subjective) of some of the common issues raised by visitors and Explainers.

Graphic depictions of the body: comfort levels
Perhaps the most divergent views on the appropriateness of displaying graphic images of the body were expressed by two African-American males: one, a medical doctor in his 30's, and the other, a man in his 50's. The older man found all the images he saw to be challenging:
- The wax is least challenging, but none of them are comfortable. ...
- All of them are too graphic. ...The hand and skin are morbid. I think
of the sacredness of the human body; to look at it like this doesn't seem right.

and inappropriate for a science museum, even for adults:
- It's a picture of a naked man, not scientific.
- It sounds gross. It wouldn't be interesting, unless to medical students. Only they are comfortable with body parts.
- If this was an exhibit, it needs to be less real; it's too grotesque.
- Well, adults can look at what they want to. Or leave. But it's not appropriate for a public exhibition.

By contrast, the younger doctor seemed to delight in the graphic detail, and felt that it was particularly important to show complete, uncensored, and anatomically accurate images of body:
- I like the fact that it's explicit, that you don't cut out the genitals. I'd like higher resolution though.
- It's quite rare; I've never seen anything quite like it. Photograph the whole thing; don't cut the head. There's quite a lot of Puritanism still existent, especially in Asian countries. Certain body parts are routinely not depicted, even in professional circles. If you're going to educate, then educate. Don't sanitize, based on somebody's shame pattern.
- Interesting. It appears to depict oriental physiology. But it's not exactly how I would depict that. I'm also an acupuncturist. So in that regard I don't like this image. I think it's a good thing to depict the oriental physiologic anatomy. But if you do it, it should be physiologically correct from an oriental standpoint... But it should be imaged correctly from a generally accepted standpoint of people who understand that type of anatomy. eg. digital anatomical images should be correct and fully depicted.
- They're fine, for adults and children.

Others gave opinions that fell somewhere inbetween these views.

When viewers were asked which of the images they found most personally challenging, only one person (the man just quoted above) found them all challenging. However, eight people (6 visitors and 2 Explainers) did not identify an image because they felt that none of the images were challenging. Among the images that did get identified as most difficult to see, the two most frequently mentioned (by both the adult and Explainer audiences) were the photographs of the dissected face and the birth. The viewers who found the face challenging used descriptions such as "blunt," "disturbing," "very real," and talked about their own thoughts of aging and death. Those who found the birth most challenging talked about it as "real," "living," and "naked." Other images were mentioned less frequently, and many people seemed to answer the question by interpreting "challenging" in a positive light, as something that gets one thinking or presents a puzzle. This was not the intention of the question, so these responses have not been tallied in detail.

When asked if anything they had seen was inappropriate for children, the largest number of adult visitors (12 out of 26) said that nothing they had seen was inappropriate. A
further 3 said that the images could be made appropriate if presented in an appropriate context and with careful explanation. Of the four teachers interviewed, two (those of grades 6 and 8) said that nothing was inappropriate, while the other two (both teachers of grade 5) felt that the birth picture was the only one that was inappropriate. Among the Explainers, there was widespread concern about children seeing the birth image and the dissected face. They felt that children might find them scary or disgusting and could have nightmares. The adult visitors had a more varied response in choosing images that might be inappropriate for children. They mentioned a total of 9 images out of 10 as inappropriate. However, in most cases it was a single mention by a single adult; the only images that received multiple mentions were the face, birth, and the wax Venus, which 4 adults thought inappropriate for children because of the "blood and guts" displaying of organs.

The vast majority of adults and Explainers (all but 3 people) said that the images would be appropriate for adults.

**Nudity**

Three of the images show genitalia as part of the full-body landscape: the thermograph and birth show female genitals; and the skinned man shows male genitalia, albeit without skin. However, people viewing these images only very rarely mentioned the genitalia at all. The full set of references are as follows:

**Thermograph:**
- It's a woman squatting kind reminds me of a heat sensor thing of girl styling for a porn picture. (female Explainer 17)

**Birth:**
- It's too naked. (male Explainer)
- Why no hospital gown? Or a shirt? (male Explainer)
- I think that is ok to show woman giving birth but not to kids they might be disgusted. (Explainer)

**Skinned man:**
- I'm not sure. It's a picture of a naked man, not scientific. (African-American male 50s)
- I like the fact that it's explicit, that you don't cut out the genitals. I'd like higher resolution though. (African-American male 30s, medical doctor)
- It's holding up the remains of another person; the spirit's gone and the body remains. The body itself is attractive. It looks like it has 3 penises. His expression seems to ask "What happened to this person?" (European-American female 60s, high school teacher)
- 9-year old daughter: Mom asks "Is this easy to look at?" Daughter: "Yes. It's a boy, huh? Do you have any pictures of a girl? What's this? Is it a skin? Looks like a monster skin, with the fingers like this."
- What were they trying to depict with the penises? Is it supposed to be muscle? Looks a little out-of sorts. Is it colored wrong? {all references to penises} [It's real, plastination. There is one penis, but the testicles actually do go up that far.] Isn't that interesting. Why is the skin left on the hand? [I don't know.] (European-American female 60s, high school teacher)
- It looks all very obvious, but I didn't realize the testes went up that far. What kind of image is this? [plastination] It's real? Wow! That's really something. Just ripped his skin off. It must be hard to do: it's all in one piece! Well, almost. A few cuts here and there. Fascinating.  (European-American female 70s)

In almost every case, any reference to the genitals seemed matter-of-fact rather than suggesting that viewers were shocked or offended. The only exception seems to have been the birth image.

**Viewers' own questions**

Visitors asked a wide range of questions about each image they saw. However, across the full set of images, some types of questions were especially common:

- What is this image for? What is it's purpose? What is it trying to show?
- What is the context of this image? When and where was it taken? What led up to it?
- What exactly are we seeing? Is this real? Is it a real person? Are they alive? What are they doing?
- What is known about this individual? Who was this person? How did they die?
- Can you give me more details about the body parts? What are the various organs? Why do they look this way? How do they work?

**Viewers' areas of interest and concern:**

We noticed the following themes in viewers' responses (in no particular order):

- Anatomical correctness. Viewers often commented on the degree of anatomical correctness of an image, usually favoring those that were more anatomically correct.
- Implications for health and illness. Several people talked about specific illnesses they or their friends had suffered, and expressed interest in understanding more about the mechanism of the body.
- Clear distinction between art and science. Several people mentioned that some of the images looked "more like art than science," and some were puzzled by this. One person felt that art pieces were inappropriate in a science museum.
- Aging, mortality and death. This was raised as a reference to someone in an image or the viewers' own aging and mortality.
- Fascination with unusual views of the body. In particular, seeing what's "inside" had strong appeal to many viewers.
- Appreciation for body. Several viewers mentioned the fragility of the body, taking care of it, marveling at its workings, etc.
- Judgment and interpretation of body shape. Several viewers were quick to judge the torso in particular, many finding it "ugly," "boring," "old," or "fat." Many viewers also talked about the changing standards of women's beauty through time, especially in terms of body weight.
- Strong personal connection. In the case of the birth image, several women were moved to talk personally about their experiences of childbirth.
- Being impressed with the technology. Only one person (an Explainer) mentioned one disadvantage to technological advances (that we think of ourselves as "a bunch of cells, rather than spiritually"), but several talked about how impressive or marvelous the imaging/implant technology is.
- Similarities of body mechanism. Several viewers talked about how "we're all the same underneath."

**Teaching opportunities**
On three occasions adults spontaneously mentioned that they could use the images to teach something to their students or children. Specifically:

**Dissected hand:**
- It's not repulsive in any way. In fact, I could make a lesson out of this: 102-107 bones in the body, and maybe a dozen or so are in the hand. (European-American male 50s, 8th grade teacher)
- With the based exposed, it's a great way to see the tendons. We do things at home with my kids, because I studied acupressure, where we push on tendons, and your fingers curl, and the kids wonder why. With that picture, they could see what causes the tendons to move. (Asian-American female 30s, ranch/college)

**Implants:**
- They're fine, not insulting to me or offensive or anything. Just right in a classroom, for junior high. They're neutral. You always have to watch out for that; if you show videos in class, parents get told all kinds of things, so it can be tricky. (European-American male 50s, 8th grade teacher)

**Familiarity with the theme of the exhibition**
At the end of the interview, viewers were asked whether they thought that images of the human body affect how they see themselves. A sizable minority of viewers (5 adults and a majority of Explainers) said no, such images did not affect how they see themselves. Of those who thought there was an impact, the most frequently quoted effect (mentioned by 13 people) was one of increased understanding of the mechanism inside their own bodies. Other types of effect included thinking about their own health/mortality, seeing themselves in terms of media stereotypes, and feeling a humanizing sense that "we're all the same."

Viewers were then asked whether changes in imaging technologies over historical periods might affect how people see themselves. In this case, only 5 people said no. Commonly cited impacts were: stereotypes of women's figures and beauty (8 people), increased access to images by regular people (4 people), increased understanding of the body's inner workings (6 people), and the implications of increased knowledge leading to greater appreciation and care for our bodies in current times (6 people). A further 2 people mentioned the empowering aspects of technology, and 1 mentioned its limitations ("there's still a lot we don't know") but none mentioned its drawbacks, biases or side-effects.
Results in detail

Because visitors were not sampled systematically, but so as to maximize diversity, and because the total number is less than 30, we choose not to split responses into demographic or other subgroups. Instead, we give the complete set of responses in detail, grouped by question and image, followed by brief summaries of some of the most common responses, to highlight some of the strong themes that emerged.

Responses to individual images:
Note: words in curly brackets {} indicate interpretations by the interviewer.
Note: words in parenthesis () indicate visitor's gender, estimated age, and cultural/ethnic, linguistic or professional characteristics where known. Explainers did not all volunteer personal information, but all were high school students aged 16-18.

1) Arabic Anatomical Diagram from 1300's

Could you tell me what you first impression is, when you look at this image?
- Looks more like modern art. (European-American male 50s)
- Someone diagramming the life cycle, or the beginning of the self. Looks androgynous, not particularly a woman. Obviously from Asia. (European-American male 40s, 6th grade teacher)
- Nothing strong, nothing confusing about it. (European-American male 40s)
- Intestines and veins. Blood systems, main arteries. Looks Chinese to me, but I don't know if it is. (European-Australian male)
- About organs, systems of the body. She's pregnant. (Phillipino female 40s)
- Kind of weird. The face looks Asian. (Asian-American female 20s)
- Visceral comes to mind. I feel intrigued, challenged, slightly grossed out at first. The simplistic form of vivisection. It's a he, no a she, that's a baby. I think of pregnancy, and the miracle of life. That we give birth to a body so perfect. My friend had a baby that wasn't perfect. There are good and bad births, and we're lucky in this rich society to be able to care for children that aren't born perfect. (European-American male 20s)
- Interesting. It appears to depict oriental physiology. But it's not exactly how I would depict that. I'm also an acupuncturist. So in that regard I don't like this image. I think it's a good thing to depict the oriental physiologic anatomy. But if you do it, it should be physiologically correct from an oriental standpoint. e.g., the function of the organs and how they're metaphorically depicted, is good functionally. But it should be imaged correctly from a generally accepted standpoint of people who understand that type of anatomy. e.g., digital anatomical images should be correct and fully depicted. (African-American male 30s, medical doctor)
- From the Eastern religion; I’m going to guess from the stance and facial features. Looks like a pregnant individual. (European-American female 39)
- It looks very unhappy, disturbed. Not very attractive or pleasant to look at. (European-American female 60s, high school teacher)
- Someone pregnant, there's a baby. Veins and such. (European-American female 20s)
- An artist's work. My son-in-law paints, and all of his pictures look like this. Unusual. The organs are in the wrong place. These lines are obviously ribs. (European-American female 70s)

* Child aged 6, when asked for a reaction: I don't like it. I don't like those parts (points to internal organs)

Explainers' responses:
- Is it real?
- It's like an ancient drawing.
- Is she pregnant?
- Looks kind of Hindu.
- Looks evil.
- Are they lymphatic vessels or blood vessels?
- Funny shaped head.

Have you ever seen anything like this before? Where?
- Not this, exactly. But there's something that suggests Da Vinci, that one. (European-American male 50s)
- Maybe something similar in an Indian or Asian script. (European-American male 40s, 6th grade teacher)
- No. (European-American male 40s)
- Maybe in museums and such. (European-Australian male)
- Yes, in hospital. I work in a hospital. (Phillipino female 40s)
- Kind of. Reminds me of drawings from Tibet, religious drawings describing human nature. (Asian-American female 20s)
- No. (European-American male 20s)
- No. (European-American female 39)
- Yes, I've traveled all over the world, and to the far east. I don't like the overemphasis of oriental features. (European-American female 60s, high school teacher)
- No, not really. (European-American female 20s)

What kinds of questions come up in your mind? What would you like to know about this image?
- It's not clear what the image is trying to suggest; multiple things going on: internal organs, major arteries, or what; it's unclear. [13thC, systems for medical purposes, not thought to be anatomically correct] (European-American male 50s)
- Where is it from? [Middle East, 13thC] Obviously some of their earliest attempts to show the body; not very accurate [not anatomically correct, shows systems.] (European-American male 40s, 6th grade teacher)
- What is the central theme? What is it? [13thC, body/internal systems; not supposed to be anatomically correct] Well, they got all the systems: the blood, endocrine, reproduction. It's a little over-stylized. (European-American male 40s)
- Is it a 14th-16thC Chinese medical drawing? [13thC middle East]
  Does it have to do with systems? There's no heart or other organs, really. [Yes] Why is it crouching like that? Is has a fetus, so it must be a woman. Is she giving birth or using the bathroom? What's
the circle in the throat? [I don't know.] (European-Australian male)

- What is it? [13th C middle east, not anatomically correct] 13th Century, oh my goodness. Why are there no fallopian tubes? [not anatomically accurate] What is the purpose? Are you showing images before and now? [Yes, how body imaging has changed.] OK. (Phillipino female 40s)

- What's the purpose? [13thC medical, not anatomically correct.] Oh. (Asian-American female 20s)

- Who did it? It looks Asian. [13th C, system view, not representative] Was it done for a scientific purpose, or art? [science, I believe] I'd like to know why it was done, and by whom. (European-American male 20s)

- Where is it from? [Arab middle ages, diagram of a pregnant woman] OK, because of the eyes, I assumed it was depicting an oriental anatomy. (African-American male 30s, medical doctor)

- It's a little ambiguous: looks like a man at the top, but is pregnant. So is there more to the story than the anatomy lesson? The darker organs, are they highlighted for any reason? [Diagram, not realism] From what I know of basic biology, what are these things doing? (points to wavy lines, showers from the kidneys). [functionality of different parts.] What year? [1300s] They had dissections then? [Yes. Arabs kept records of ancient medical practices, also did dissections, but this is a diagram.] (European-American female 39)

- I find it unattractive. You could find a lot better image to look at. The position doesn’t look comfortable. Are they going to the bathroom? Almost looks like a monster, or on its way to being a monster. Where did they get this image? [13th C middle east, medical diagram showing systems] Doesn't look Iranian or something. Is it in the position of having a child? [don't know] (European-American female 60s, high school teacher)

- Is this supposed to be the nervous system? Where is it from? [13thC diagram, Arabic, representational, not realistic] (European-American female 20s)

* Father to 2nd grade daughter: "What do you see?" Daughter: "A person, legs, nose, mouth, eyes, ears, I think that's a baby, hair stomach." Father: "What's after the stomach? Where does food go?" Daughter: "To the bathroom." She runs off.

**Explainers' responses:**

- What did they know about the body? How did they perceive it? Was it a spiritual thing or just how it worked?

Now that you know a bit more about this image, what do you think about it, or feel about it?

- Makes more sense. Shows how primitive knowledge of the body and its functions were at that time. (European-American male 50s)

- It's interesting. Funny that they don't have a brain in here. Relatively correct elsewhere. (European-American male 40s, 6th grade teacher)

- Pretty simplified. I keep being drawn to the eyes; I don't know why. (European-American male 40s)
- It's probably correct for the time. Did they dissect at that time? 13th C, before dissections and that kind of stuff. Middle East: they were pretty up on medicine. (European-Australian male)
- They're just showing how does the body, as a system, how does it move, on the inside. (Phillipino female 40s)
- It's amazing, back in those days, before modern technology, what the inside of the human body looks like! Certain points are correct. (Asian-American female 20s)
- Fascinating. I want to know more; why is it significant? (European-American male 20s)
- If you use it, say that this is not the way they depicted anatomy, but how they viewed the functionality of the anatomy. And have a basic description of the functional anatomy and physiology. (African-American male 30s, medical doctor)
- It's a primitive attempt to diagram the human body and its workings. Not threatening at all. (European-American female 39)
- Unless this is going to be displayed showing historical changes, it shouldn't be shown. It's very austere. It's interesting, from that period. Kids don't read; they just want to look and go on. They would see it and say "ugh!" and go on. (European-American female 60s, high school teacher)
- Nothing. (European-American female 20s)

2) Thermograph of Woman

Could you tell me what you first impression is, when you look at this image?
- Some sort of xray, or type of CAT scan. (European-American male 50s)
- Infrared picture, showing temperature ratings of the body. Obviously female. (European-American male 40s, 6th grade teacher)
- Looks like it's a woman. (India female 30s)
- This one is a female. From a computer. It seems like she's relaxing, doing some yoga. (Phillipino female 40s)
- I think it's a female, right? Like and xray picture. I see details. She has nice eyes (laughs). Different colors, each color means something different. What does white mean? Or green? (Middle-Eastern male 40s)
- That's a lot cooler picture: kids would like it better. The color patterns are interesting. The person looks proud of their body, more comfortable. It's interesting. A long, narrow face, and no chin, really. (European-American female 60s, high school teacher)

* Child aged 6: I like it because it has colors.

Explainers' responses:
- This picture is to me like a woman most likely doing yoga or something and is being pictured with some heat sensing lense or maybe infra-red. (male 17)
- It's a woman squatting kind reminds me of a heat sensor thing of girl styling for a porn picture. (female 17)
- That is is a girl. They took the photo in infer red film, or heat scener. (male 16)
- All of the red light seems to be over all of the muscles on her body. Under the armpits to the breast, all the way down. (female)
- It's very confusing, you don't know what is a girl or boy. (male 17)
- Very colored. You can see hot and cold spots on the body.
- A woman with different segments of colors throughout her body.
- Looks like a body of woman sitting there crossed leg.

Have you ever seen anything like this before? Where?
- No. (European-American male 50s)
- Yes, in books and on TV. (European-American male 40s, 6th grade teacher)
- No. (India female 30s)
- I've seen this position a lot on TV and in movies, but not this kind of picture. (Phillipino female 40s)
- Yes, I saw hand or legs in hospital xrays. (Middle-Eastern male 40s)
- No, nothing like this. (European-American female 60s, high school teacher)

Explainers' responses:
- Yes, in the movies where some predator is hunting its prey with heat-detecting eyes or such. (male 17)
- Yes but not in a position like that. In the movies. (female 17)
- No. (male 16)
- Yes, discovery channel, heat signatures. (male 17)
- No. (male 17)
- TV where they so the cold and hot area and a body. Reminds me of the movies, heat signatures. Like Terminator.

What kinds of questions come up in your mind? What would you like to know about this image?
- Is this a medical xray? [Thermograph: white areas show blood vessels near the skin, green shows more body fat.] I thought it was along those lines. It would make a nice piece of modern art! (European-American male 50s)
- I'd like to know why certain parts are warmer than others. But I do know it's showing the blood systems and the body, which conserves heat, and keeps the blood lower {ie. away from the surface}. That's what the different colors are, aren't they? [Yes. White is where the blood vessels are closest to the surface.] (European-American male 40s, 6th grade teacher)
- What are they showing? [Colors indicate different temps. White areas are where blood vessels are closer to the skin, green more body fat.] Is that what they're trying to achieve, showing blood vessels? Why choose a woman's body? Why this pose? (India female 30s)
- What is the person doing? What is the purpose? [Thermograph, blood vessels, body fat, etc.] Still I don't understand, why this kind of picture? (Phillipino female 40s)
- What do the colors mean? [White=blood vessels near skin, green=denser body fat] For what reason is this taken? Medical things? Is this the highest level of technology? What's the reason
for this? It’s not for a joke; it must be expensive to do. [Medical, I don't know.]
- It looks almost like it could be a weaving from another culture. Looks like a cactus in their stomach. [thermograph, blood vessels close to surface show white, other colors depict blood vessels further from surface.] Very interesting. At first it looks like a Peruvian cap on their head, but it's not. (European-American female 60s, high school teacher)

**Explainers' responses:**
- What does the different colors mean? (male 17)
- What is this? What does each color detect? What is this used for? (female 17)
- What it is. What’s the color mean. Why they took the photo for? (male 16)
- What does each color represent? (female)
- What does the colors mean. (male 17)
- Does the color show these hot and cold spots? - Why is it the colors?
- Is that a woman?
- Why is there nothing going on in the brain?
- Why is it those colors? What do they represent?
- What is it?
- What is it used for? What’s the point in science? Can you learn anything from it?

Now that you know a bit more about this image, what do you think about it, or feel about it?
- It makes sense, and it’s not complicated, if you know how to interpret the coding. (European-American male 50s)
- Interesting use of technology, to explore the body by temperature. I imagine you could tell all sorts of things, data, from this. But what? (European-American male 40s, 6th grade teacher)
- I’m not sure. Why are they using this photo? (India female 30s)
- I want to know, what does this picture mean? (Phillipino female 40s)
- I know something I didn't before: the name of it. (Middle-Eastern male 40s)
- Very interesting. The color scheme is very interesting to follow. (European-American female 60s, high school teacher)

**Explainers' responses:**
- It's an interesting picture. (male 17)
- Interesting to know the temperature of different parts of the body. I didn’t know ovaries were one of the hottest parts of the body. (female 17)
- Why? (male 17)
- Why. (male 17)
- She’s happy.
- It's a good picture. Now people can tell that your body gives off heat.
3) Kenneth Wilkes: Dissected Face

Could you tell me what you first impression is, when you look at this image?
- It's mummified or something. Definitely dead. Obviously ancient; the skull has opened, and the scalp has been removed. (European-American male 40s, 6th grade teacher)
- It's gross; is it leprosy? They've lost their nose. Is he alive? Is this the skin's texture? It looks like it has been eaten and peeled away. Decomposed or something. (European-American male 50s, ~5th grade teacher)
- The guy has been around too long. I'd almost say it's a mummy. It's been dissected one too many times. (European-American male 40s)
- The nose looks like a witch's nose, scary, not nice. When I cover it, you can look very carefully at what is shown. Your face, when dead, or a mummy. Like under a bandage. Looks like an artist has made a model, found some skin; looks put-together or like it's constructed, with all the layers. (Polish female 30s)
- Puzzlement. I'm not sure that it's possible. Too many things that look like real skin, but it can't be. Will you tell me that it's real? (European-American male 50s)
- I've seen dozens of pro-sections like this, parts of the body dissected. (African-American male 30s, medical doctor)
- It reminds me of a National Geographic, where I see them unearthing tombs, and mummies. (European-American male 30s)
- Is this the mummy they found in the Andes? About five or six years ago, they unearthed a frozen guy in an ice flow. (European-American female 39)
- Looks like somebody dead and decaying, like his face is falling off. Hm... (European-American female 20s)
- Oh, it looks like something in a museum of natural history. Is it a mummy? Did he remove his skin? When someone dies, this is what they must look like in the coffin. (European-American female 70s)

* Father to 3rd Grader son: "What is this?" Son: "A shrunken head?"

**Explainers' responses:**
- Spooky, very confusing. (male 17)
- My first impression is that it's an old rotten looking man. Kind of scary. (female)
- That the picture look scary and it is just so nastay. (male 16)
- Doesn't look real but if it is it's scary and how did he get that way? (female 17)
- My first impression upon looking at this picture was horror. This person was most likely a victim of a fire or other burn-related injuries. (male 17)
- Looks like person's head and face is taken apart like the skin. You can maybe see flesh and all.
- It very different it looks as if his face has been destroy by something and I would like to know what?
- Wow. Very scary looking if you was a little kid.

Have you ever seen anything like this before? Where?
- No.  (European-American male 40s, 6th grade teacher)  
- No.  (European-American male 50s, 5th grade teacher)  
- Not a photo. When I was little, I was in the explorer scouts, and we went to the morgue of a dental school to see a dissection. They have to learn about nerves and muscles in dentistry. It was very cool. (European-American male 40s)  
- No. (Polish female 30s)  
- Never.  (European-American male 50s)  
- It reminds me of a National Geographic, where I see them unearthing tombs, and mummies. (European-American male 30s)  
- No.  (European-American female 39)  
- No.  (European-American female 20s)  

Explainers' responses:  
- No. (male 17)  
- Yes, war crimes.  (male 17)  
- No. (male 16)  
- Something like that. You know those sick book with pictures of disgusting deaths and diseases. (female 17)  
- No.  (male 17)  
- No.  
- No.  
- No.  

What kinds of questions come up in your mind? What would you like to know about this image?  
- Why did they take off his layer of skin? Why did they cut open his forehead. Obviously it's some kind of autopsy. It looks ancient, like it's part of some kind of ritual. [part of a contemporary autopsy. KW photographs bodies donated to science to document that people were individuals]  (European-American male 40s, 6th grade teacher)  
- What is it?  [photo of medical cadaver; photographer documents people]  How neat. He does look like he was taken apart: see how the skin is cut away here and here. Is he Chinese? [the photo says "Taipei." I don't know; the exhibition was in Taipei]  (European-American male 50s, 5th grade teacher)  
- Why are the skin textures different? What am I looking at, an autopsy? Skin, muscles, what is the purpose? Is it for instruction? [photographer records bodies donated to science to document their existence as people.] How long has the person been dead: one day? centuries? [bodies recently donated to science] What a mess!  (European-American male 40s)  
- Is this real? [Yes, medical cadaver.] Oh, I know what it is now! Dissection, autopsy. (She points to all the different layers) Taipei? [That's where the photos were displayed, in a gallery.] Looks like it's not a Chinese person; the nose is shaped wrong. It's not, is it? [I don't think so; the artist is from California, although the show was in Taipei.]  (Polish female 30s)  
- Is it real? [Yes] Real skin? [Yes] The texturing, doesn't seem as though it's possible, but that's what's under our skin. What is this? [cadaver, for medical purposes. Photographer's way of documenting that they are real people.]  (European-American male 50s)
- Is this a mummy? [contemporary person dissected] Yeah, it doesn't look mummified; it looks hacked up. So they've sliced it away to see the underlying structures for scientific purposes? [Yes. But this is to show the individual person...] That's not what I think about; it's a grim reminder of death, and how fragile we are. And it's obviously a scientific dissection, possibly to stop this happening again, by preventing disease, etc. But the individuality of the person didn't leap out at me. (European-American male 30s)
- Where is it from? What's the timing? What's the era? Where was it found? Was it unearthed? Part of an autopsy? [contemporary doctor/artist, body donated to science.] Yeah, it's got the skull cut open, so you're seeing a cross-section of the underlying tissue. Who was this person? What happened? [That's his point: to make an individual connection.] Yes, he donated his body to science, great; but who was he? You'd like to think people maintain their identity through death; it's such an awful thing - or a major thing - and you'd like to think whoever you are would continue after death. (European-American female 39)

Explainers' responses:
- How did he die. (male 17)
- How he died. How old. (male 16)
- What happen to him? (female 17)
- Is this person decapitated? Is this person still alive? Is this person someone punished for some crime or such? (male 17)
- What exactly happen? How did this come about?
- Do they clean it before cutting skin.
- How did they open up his skin.
- What happened to that guy?
- Was it a war crime?
- Is he decapitated?
- Is it a mummy?
- Is it just decomposed?
- What are the lines going through his face?
- Was he old?
- Is he alive?
- Can you sell your body to science?
- So down here is where the skin is cut off?
- Was the rest of his body also in that condition?
- What kinds of tests did they do? Did they experiment?
- Why do some parts look dry and others look alive?

Now that you know a bit more about this image, what do you think about it, or feel about it?
- I don't know; the photographer is being redundant; we know he's a person. I did autopsies in pre-med, and we were all very aware of the human, the individual who had lived. (European-American male 40s, 6th grade teacher)
- I know that's the way doctors learn. (European-American male 50s, ~5th grade teacher)
- I don't think I'll donate my body; they can have my organs and cremate the rest. (European-American male 40s)
- It's interesting. We don't realize what I will look like when I die. You can't just open my skin and say "What do I look like inside?" (Polish female 30s)
- So that's a photograph, wow. I don't know much at all; I had no idea that's what we look like underneath our skin. (European-American male 50s)
- This is very interesting. It might be a bit gruesome for some, but in a black and white setting it's fine. (European-American female 39)
- Nothing. (European-American female 20s)

Explainers' responses:
- I don't think is appropriate for children to see this picture. (male 17)
- I wonder if the rest of his body is in the same state. I understand that he was used to students exhibits. And that very interesting and would to that to any body. (female)
- Gross. Disturbing. Story behind it. Life/person. Compare to something that happens in war. (male 17)
- After I know more about the picture it is not that scarey because he did it on his own will. (male 16)
- It's kind of weird but cool to know on what some people do, like donating their bodies for experiments like this. And what happens after. (female 17)
- Amazement. I can't really say I've ever seen anything of this nature. (male 17)
- Very interesting picture. If I new lots of info about this picture, I think it would be more interesting.
- It seems like they didn't really cut up all the skin like the nose. But I feel cool about it maybe a little disgusted in a little way.
- I think it interesting good to let people know how we look on the inside.

4) Photograph of Man's Torso

Could you tell me what you first impression is, when you look at this image?
- Abdomen, navel. At first it looks like some kind of animal. Any kid who has parents has seen this. Very hairy, though. (European-American male 50s, 8th grade teacher)
- A man's body. (European-American female 40s)
- I see pictures in it. You can't tell what it is right off. It's different. (European-American male 30s)
- Awful. (Polish female 30s)
- A face. You have to study it before you realize what it is. (European-American male 50s)
- It's hairy. A man's chest and stomach. It also could be a face. (European-American female 30s)
- At first it looks like a face. But it's a body. (European-American male 40s)
- A healthy 65-year old. Interesting that you don't have that washboard body. (African-American male 30s, medical doctor)
- Just a male torso. What's the purpose of this? (European-American male 30s)
- Looks like a face, but I know it's a body. (Chinese-American female 30s, 4th grade teacher)
- Really hairy man's body. I've seen a few in my time. (European-American female 70s)

Explainers' responses:
- What is it?
- Is it a woman or a man?
- Do we have to see this? Just kind of weird; how is this educational?
- If it's educational might depend on the context.

Have you ever seen anything like this before? Where?
- No. (European-American male 50s, 8th grade teacher)
- No. (European-American female 40s)
- No. (European-American male 30s)
- Yes, on the beach. (Polish female 30s)
- No. (European-American male 50s)
- Yeah, my husband. He has a hernia scar too. (European-American female 30s)
- Yes, in real life! (European-American male 40s)
- In a mirror. (European-American male 30s)
- Yes, a man's body. (Chinese-American female 30s, 4th grade teacher)
- Yeah. Not very nice, not even sexy. (European-American female 70s)

Explainers' responses:
- No.

What kinds of questions come up in your mind? What would you like to know about this image?
- Is this a sick or well person? The skin seems to be dry. Is this person dead or alive? [Healthy 65-year old man, photographed himself]. (European-American male 50s, 8th grade teacher)
- No questions; it's more of a visual thing. I'm sure they want you to see a face in it. (European-American female 40s)
- His body is shaped differently. How old is this guy? [65] How did he figure out how to take this picture? [He's a [photographer.] (European-American male 30s)
- How much fat there is: the levels, under the skin. In the hospital, you have an operation, and there's a scar here (points to right side of abdomen). How old is the person? [65] Oh, it's not too bad. Maybe he should exercise to lose the fat. Why is this photographed? [self-portrait] He should lose some fat, so you could see muscles underneath. (Polish female 30s)
- Not really. Is it a male torso? [Yes, of a 65-old, the photographer.] (European-American male 30s)
- Nothing really. Why? [photograph of himself, 65] Not bad for 65! He's very hairy. Do you think some men shave their chest? We have a friend who's Asian, and he has no hair on his chest. He must shave, huh? [I think different cultures have different amounts of hair.] (European-American female 30s)
- Not particularly. Why has it been taken? [Self-portrait of artist in his 60s] (European-American male 40s)
- What's the purpose? [He's a doctor and photographer.] It's art? But you aren't an art museum... I find this one pretty uninteresting; you'd need some context for this. [intimate body portrait] I find it depersonalized rather than intimate: there's no face, just a big rectangle of torso. That's why I find it uninteresting; everybody's got one. (European-American male 30s)
- Why do some people have so much hair, and others don't? It's probably genetic. Who took the photo? [Self-portrait, 65-year old man who is a photographer.] (Chinese-American female 30s, 4th grade teacher)
- No. I see a face in it; I guess it's like a Rorshach test. Poor guy; he's not very good-looking. (European-American female 70s)

Explainers' responses:
- What purpose could it possibly serve?
- How does it belong?
- Not bad, just what's the point? [Sue explains sympathetic photo of older man's body]
- In that case, you should have it with other pictures too, of other bodies.
- You need an explanation for it.

Now that you know a bit more about this image, what do you think about it, or feel about it?
- I think he did a good job! It'll raise curiosity; it's hairy and has no head. What is it? Good photo. (European-American male 50s, 8th grade teacher)
- Nothing else. (European-American female 40s)
- I think he's exploring his alternative side. (European-American male 30s)
- It's not too strange. If you see pictures of the old and fat, it's strange and makes you feel weird. But for 65, it's not too bad. (Polish female 30s)
- I don't have any feelings one way or the other. I keep seeing a face. I wouldn't want a photo of my own torso, but maybe others would, I don't know. (European-American male 50s)
- It's ugly and hairy. Can I stop looking? (European-American female 30s)
- Nothing new. (European-American male 40s)
- It's a healthy body, 65, right? No big belly or saggy skin. (Chinese-American female 30s, 4th grade teacher)
- Nothing. It's rather boring. Who needs it? (European-American female 70s)

5) Implants

Could you tell me what you first impression is, when you look at this image?
- x-ray, ribs, and I don't know what this is here. Oh, it could be a pacemaker, or small radio in a pocket. The chest cavity, of course. And this one is a human breast, and the gland sac and ribs. But I
see no nipple; I would investigate that further. (European-American male 50s, 8th grade teacher)
- Looks like a silicone implant and pacemaker. (European-American male 50s, ~5th grade teacher)
- I thought it showed pregnancy. (European-American female 20s)
- x-rays. Is that a transmitter? Is it attached? Did someone swallow it? That one is a silicone implant. (European-Australian male)
- Breast, a cyst or something. And this, a pacemaker? (Asian-American female 20s)
- Implants? Or a big giant cancer. My mom had both breasts removed. That one looks like a pacemaker. It looks like a pager. (European-American female 30s)

Explainers' responses:
- Confusion: pacemaker or cancer? (male 17)
- It looks like an x-ray of someone's ribcage. (female)
- It doesn't show you much, a little confusing (male 17)
- The picture to the left [pacemaker] look like someone been smoking for a long time. (male 16)
- It's an x-ray of a chest but what is that round bubble? (female 17)
- It looks like the breasts of a person who probably had undergone breast implants. (male 17)
- x-ray of a human body. OK picture, a little boring.
- It just looks like a picture of an x-ray of the upper body, ribs and all.
- It looks like an x-ray of a woman's chest and a man's chest.

Have you ever seen anything like this before? Where?
- No. (European-American male 50s, 8th grade teacher)
- No. (European-American male 50s, ~5th grade teacher)
- The silicone implant. I'm not sure what the other one is. (European-Australian male)
- No. (Asian-American female 20s)
- This looks like a pager. The breast, no. (European-American female 30s)

Explainers' responses:
- No. (male 17)
- Similar, just normal-looking x-ray stuff, but not with the bubble and pacemaker. (female 17)
- No. (male 16)
- I don't know. Is it a pacemaker? (male 17)
- Well, something like it in a doctor's x-ray room when I broke my toe. (female)
- Yes, when they show you your x-rays. (male 17)
- No.
- No.

What kinds of questions come up in your mind? What would you like to know about this image?
- Is it a pacemaker? [yes] I had a 4-way bypass, so I'm familiar with heart implants. I had a pacemaker magnet, and the one I had was very strong: I tossed it onto a metal saw of mine, and had a hard time
getting it off. It would be helpful to see the heart in this xray. [It's a silicone implant] A 13-year old {presumably the age of his students} would never guess what this is. If you don't have one, you won't recognize it. (European-American male 50s, 8th grade teacher)

- What is this? [pacemaker and silicone implant]/ What is this back here? (reddish image behind pacemaker) [I don't know.] How is it made? It's not an xray, because there are no organs. Maybe a scope {meaning orthoscope or equivalent}. [I don't know] (European-American male 50s, ~5th grade teacher)

- What is this? [Pacemaker] Seems over too far to the left, so I didn't think that's what it was. What does it do to the heart? What's it made of? I don't know much about them. When were they developed? And what's the benefit of silicone implants, unless you have breast cancer? What's the danger? How long do they last? (European-Australian male)

- What is it? [pacemaker] It looks the size of a small beeper! Is it silicone? [yes] It's kind of scary looking.
- (Breast image): Are the ribs hollow? [I don't know] Is it an implant? [Yes]. (Pacemaker:) Has the person been smoking? The lungs look black. Is the photo taken from the front or the back [I don't know.] It's a pacemaker though? [Yes.] It's colorful. Too bad it's on the inside; if I could, I'd put implants in my kids, like they do in pets, so if something happened, I could find them. Kinda weird idea, huh? (European-American female 30s)

Explainers' responses:
- What is it really? (male 17)
- Is that a pacemaker? What's the bubble? (female 17)
- What are the picture about. (male 16)
- What are they? (male 17)
- Is the pacemaker really that color?
- What is it? Is it a tumor?
- Why is one colorful and the other just blue? Is it about the technology?
- Is this a woman's chest? A tumor? Cancer? A heart?
- What is it if it's not an xray?
- If the bubble burst, what would you see?
- What's the other stuff around the pacemaker?
- What's the story behind it, or the person?

Now that you know a bit more about this image, what do you think about it, or feel about it?
- They're fine, not insulting to me or offensive or anything. Just right in a classroom, for junior high. They're neutral. You always have to watch out for that; if you show videos in class, parents get told all kinds of things, so it can be tricky. (European-American male 50s, 8th grade teacher)
- Looking at the inside out {meaning you can see what's normally inside} , it's cool. But they're missing their insides; no vital organs. (European-American male 50s, ~5th grade teacher)
- Anatomy and technology together is very fascinating. (European-Australian male)
- Maybe wonderment at modern technology. One of the greatest innovations, is human beings changing their bodies, for beauty or for health. (Asian-American female 20s)
- They're informative. It's cool to look on the inside. I had a hernia operation, and I wanted to see more, although I did see a lot! (European-American female 30s)

**Explainers' responses:**
- It's interesting but I don't really have any reactions. (male 17)
- It is very interesting especially about the silicon implant but now that I know I understand a bit more. The pacemaker looks cool too. (female 17)
- The picture to the right (breast) is kind of fun. I never know it looks like at {that?}. (male 16)
- Surprise, odd, confusion, interesting. (male 17)
- It's interesting and I would like to know facts about it. (female)
- It's really interesting because probably yo have never seen this before. (male 17)
- I think that it is very interesting because it's not something you see every day.
- I feel that it just got something to do with your body. Just an image. Also at first if was tricky a little.
- Very interesting. It's very surprising to see inside of someone.
- Pacemaker doesn't grab attention.

6) Kenneth Wilkes: Dissected Hand

Could you tell me what you first impression is, when you look at this image?
- A wrinkled hand. Perhaps of a mummy or recently deceased person. A mummy. (Shows to wife, who says it looks like a mummy or a gorilla). (European-American male 50s, 8th grade teacher)
- Oh wow. A farm worker, or an immigrant, or maybe an Indian's hand. (European-American male 30s)
- Oh my goodness, OJ’s glove! (European-American female 30s)
- This is really a working hand, a tired hand. What an old hand looks like, a black person. (Phillipino female 40s)
- Whoa. It's a mix between a human hand and a gorilla. It's a right hand. I think it's a picture of a human, over 90 years old. He has dry skin. The picture shows lifelines: each means something different. I think there are problems with the fingers. I think this is a huge person [not sure why - maybe because it's just a hand, so it looks big on the photo with nothing else to compare with?] (Middle-Eastern male 40s)
- What is this? (Asian-American female 20s)
- Ugly-looking hand. (African-American male 50s)
- Old age, dying. Then curiosity. What's going on? What am I looking at? Is it severed, or wrinkled? Cured, or old? (European-American male 20s)
- A hand. It looks dehydrated, with all the cords and things visible below the wrist. Looks like a bone is missing. (Asian-American female 30s, ranch/college)
- Interesting; it looks almost simian. The thumb, and size of palm versus fingers is interesting. Who's to say how the specimen is preserved. Is it human? (African-American male 30s, medical doctor)
- The hand must be very old: look at the arthritis in the fingers. The nails are clipped short. Who is it? Who clipped them?  (European-American female 70s)

Explainers' responses:
- Is it real?
- Is it a monkey’s hand?
- It reminds me of a museum that had an old human hand.
- Lucy.
- A severed monkey paw brings wishes.
- An old wizard's hand, someone with lots of wisdom and age.

Have you ever seen anything like this before? Where?
- No, or if I had, it would’ve been in a museum.  (European-American male 50s, 8th grade teacher)
- No.  (European-American male 30s)
- Yeah, on TV and in some books. Like national geographic.  (Phillipino female 40s)
- No.  (Middle-Eastern male 40s)
- Maybe a monkey or something. Is it a mummy's hand?  (Asian-American female 20s)
- No.  (African-American male 50s)
- No, not exactly.  (European-American male 20s)
- Not as flat as this; looks like the skeleton is missing.  (Asian-American female 30s, ranch/college)

What kinds of questions come up in your mind? What would you like to know about this image?
- I’m curious to know what it really is. I never saw a hand so wrinkled. [medical cadaver, photographer took picture to document person] This one is obviously dead.  (European-American male 50s, 8th grade teacher)
- Is this a severed hand? [Well, it’s from a medical cadaver, so it may be severed, or just the hand photographed.] So this is a deteriorated hand after you die.  (compares his own hand). Look at the lines: his lines are deeper. How old is the hand? [I don't know]  (European-American male 30s)
- How come the skin is getting like this when you get old? Is it too much working? Sometimes the fingers get crippled. Is that what this picture is? [Medical cadaver. Photographed to show this person was alive.] Seems like the skin is already dead; it has many lines and wrinkles.  (Phillipino female 40s)
- Is it human? [Yes] How old was it? [I don't know, medical cadaver, probably elderly.]  (Middle-Eastern male 40s)
- Seems dehydrated. It’s a black and white picture. Maybe it’s not a mummy: maybe it’s soaked in salt water. It looks like a dried plum. What is it? [human] The fingers seem shorter than the actual hand.  [from medical cadaver]  (Asian-American female 20s)
- What is it made of? [human hand, person not alive, medical cadaver] Is it shrunken from drying? [I believe so.]  (African-American male 50s)
- What? Where? It looks like a real photograph. But if it is, then that means it’s real. [photograph of donated bodies, documentation
of lives.] My grandfather donated his body. He had Alzheimer’s disease. He was religious Jewish in a political way. [Did the family have problems with it?] No, the family is dedicated to modern views. (European-American male 20s)

- What is the oddity of this picture? [Hand of a dead person] Male or female? It looks male. [I don’t know.] How old? Looks like a farmer, because the fingers are so thick. [Older is likely because it’s people whose bodies were donated to science.] Is it human? It looks a bit different, because the fingers don’t turn the same way, and the skin looks different. [Yes] (Asian-American female 30s, ranch/college)

**Explainers’ responses:**
- What’s happening at the wrist? Has it been cut off?
- Why are the fingers so bent?
- Who is it from?

Now that you know a bit more about this image, what do you think about it, or feel about it?

- It’s not repulsive in any way. In fact, I could make a lesson out of this: 102-107 bones in the body, and maybe a dozen or so are in the hand. (European-American male 50s, 8th grade teacher)
- I think it’s different. (European-American male 30s)
- I want to know what happened to this hand. What is the reason: old age? Too much work? (Phillipino female 40s)
- I feel one day, if I live that old, I will look like that. Something about God, how we start young, and grow and grow, and then no more. Like trees and the planets. (Middle-Eastern male 40s)
- I feel sorry for this person, who got their hand chopped off. (Asian-American female 20s)
- It’s not an image I’d particularly want to see. (African-American male 50s)
- More compassion. More support for what the artist photographer is trying to do. Life is from spirit, not matter. Life comes from more than this matter.
- With the based exposed, it’s a great way to see the tendons. We do things at home with my kids, because I studied acupressure, where we push on tendons, and your fingers curl, and the kids wonder why. With that picture, they could see what causes the tendons to move. (Asian-American female 30s, ranch/college)

**Explainers’ responses:**
- Fine for some people, but could be tough.

7) Photograph of Birth

Could you tell me what you first impression is, when you look at this image?

- That’s what it looks like! I never saw it from this angle! (European-American male 50s, ~5th grade teacher)
- This would be better (covers mother’s face). It’s a very private picture, to see the face of the mother. When you cover it, you can learn; then it’s educational. (Polish female 30s)
- It remind me of my kids' birth. (European-American male 40s)
- Happiness, remembering my child's birth. (Asian-American female 30s, ranch/college)
- Birth is great; it's a nice shot. She looks happy, not in pain. Normally you see women in agony. And also you see a woman delivering, which is a good thing. (African-American male 30s, medical doctor)
- Having been through this before, I wish I could have seen my son being born this way myself. If you hadn't had a child, you might be squeamish, but I felt elated having my first child. It might be challenging for men or children. (European-American female 39)
- Looks like it hurts, not very comfortable! (European-American female 20s)
- Been there, done that! Lots of stitches. I saw my daughter-in-law have her baby, and there was no look of joy on her face! (European-American female 70s)

* 9-year old daughter: Mom asks "How easy is it to look at this?"  
Daughter: "Easy."

**Explainers' responses:**
- She's having a baby. (male 17)
- Pain, birth, blood, kind of pride moment. It's happening I think about every 8 secs throughout the world as someone dies, it's all a cycle. (female)
- My first reaction was it was kind of nasty. (male 16)
- Baby being born reminds me of the health video "The Cycle of life." (female 17)
- First impression: it's a baby being born. No initial reaction. (male 17)
- Birth
- First impression is like seeing the woman giving birth.
- It's an baby being born.
- Eye catching and disturbing picture.
- It's too naked.
- Do you feel uncomfortable seeing a naked lady? (female asks male)
- She's got big nipples.
- What's up with the smile? That sickens me.
- She's happy cos she's having a baby.
- I don't think it's a smile at all; she's in a lot of pain.
- Very graphic. Disturbing.
- Too graphical for little kids.

Have you ever seen anything like this before? Where?
- No. (European-American male 50s, ~5th grade teacher)
- In a movie, called "Life," I think. (Polish female 30s)
- Oh yes, three times, my own kids. (European-American male 40s)
- As a mom. And when I was pregnant, I renting birthing videos from Kaiser. (Asian-American female 30s, ranch/college)
- I have this book! And I went through this with my son; I'm expecting my second child in June. (European-American female 39)
- No. (European-American female 20s)
Explainers' responses:
(Note: by show of hands, about 2/3 had seen something like it before.)
- Yes, I have seen something like this before at school and on TV. (male 17)
- Yes, on TV and sex ed. (male 17)
- I saw it on tape for school health ed. (male 16)
- Yes, health class had people giving birth. (female 17)
- Yes, in science class. (male 17)
- Yes.
- No, haven't seen nettting like it in pix.

What kinds of questions come up in your mind? What would you like to know about this image?
- It's obvious. No questions, really.
- Will it be shown for others? For kids? In Europe, before, the husband or family could not be present. Only someone {ie. on hospital staff} could photograph. The woman had to be by herself. Now, the husband, other kids, and family can be there. Is this someone's photograph? [I don't know. Comes from a book out of Canada on reproduction.] Looks like a very healthy baby. For women who couldn't have children before, it helps {ie. in-vitro fertilization helps}. (Polish female 30s)
- Why this photograph? [Canadian, in vitro fertilization] (European-American male 40s)
- Nothing. This is the beginning of life, something every animal goes through. (Asian-American female 30s, ranch/college)
- Nothing. Been there, done that. (European-American female 39)

Explainers' responses:
- Is it really painful? (male 16)
- Why no hospital gown? Or a shirt?
- Is she in hospital?
- The other woman doesn't look protected; she's just wearing gloves.

Now that you know a bit more about this image, what do you think about it, or feel about it?
- Nothing new; it is what it is. When people asked if I wanted pictures of my childbirth, I said no, I'd rather have memories. A face with the process is personal, not as educational; it's intrusive. Especially for kids; I'd have about 9 years of questions!
- Happy, but I need to cover the mother's face. It's still too private. (Polish female 30s)
- Nothing new. (European-American male 40s)
- It's a great exposure to life, for an appropriate age group. (Asian-American female 30s, ranch/college)
- The whole experience is one of joy for me. (European-American female 39)
- Nothing. (European-American female 20s)
Explainers' responses:
- Have more pictures of the birth before and after, to show the baby coming out, and the afterbirth, etc.
- I think it would be interesting for those who have never seen it see it.
- Kind of normal but I don't know how children would react. (female 17)
- I think it is kind of nasty but that is how it is so I guess I am ok about it. (male 16)
- Children shouldn't see this things. (male 17)
- Not much reaction due to past exposure to knowledge relating to the subject (male 17)
- I think that is ok to show woman giving birth but not to kids they might be disgusted.
- I think that it is not good for younger viewers to look at this picture. Parents might not be so happy.

8) Plastinated Man Holding his Skin

Could you tell me what you first impression is, when you look at this image?
- Intriguing. (European-American male 50s)
- It looks like a man. You can see blood and nervous system, without the skin. (India female 30s)
- Human person, male. Picture shows man's insides, but not a skeleton. It shows details inside. He got burned from high degree {ie. Assumes the skin got burned off in a fire}. His clothes or what? Fat? {ie. Doesn't see that it's skin; thinks it's clothes or maybe body fat.} (Middle-Eastern male 40s)
- I like it. At first it looks like it's from an encyclopedia. But he's holding his skin. (European-American male 40s)
- I'm not sure. It's a picture of a naked man, not scientific. (African-American male 50s)
- Really cool. You can see all the muscle structures under the skin. That's how your body works. (Asian-American female 30s, ranch/college)
- I like the fact that it's explicit, that you don't cut out the genitals. I'd like higher resolution though. (African-American male 30s, medical doctor)
- It's holding up the remains of another person; the spirit's gone and the body remains. The body itself is attractive. It looks like it has 3 penises. His expression seems to ask "What happened to this person?" (European-American female 60s, high school teacher)
- It's a man. What is he holding? He took his skin off, how about that! (European-American female 70s)

* 9-year old daughter: Mom asks "Is this easy to look at?" Daughter: "Yes. It's a body, huh? Do you have any pictures of a girl? What's this? Is it a skin? Looks like a monster skin, with the fingers like this."

* 6-year old says: I don't like it. He's inside out.

Explainers' responses:
- What's he holding in his hand?
- Why is he holding his skin?
- It's disturbing: like he's skinned.
- Reminds me of Japan: skinning people with tattoos, a Gang Yakusan.
- Looks kind of proud.

Have you ever seen anything like this before? Where?
- No. (European-American male 50s)
- No. (India female 30s)
- No. If I see it, I would die. A bad dream. (Middle-Eastern male 40s)
- No. (European-American male 40s)
- No, but I'd expect it more in an art exhibit. It's not informative, not scientific. (African-American male 50s)
- My anatomy books, and art drawing too. I took different classes. (Asian-American female 30s, ranch/college)
- The human anatomical project, where they sliced the prisoner. Is that this? (African-American male 30s, medical doctor)
- I have seen similar drawings, mostly in kinesiology textbooks {study of motion of human bodies.} (European-American female 60s, high school teacher)
- No. It took a while to see that he's holding his skin. You can see muscles, tendons, wow! (European-American female 70s)

What kinds of questions come up in your mind? What would you like to know about this image?
- I wonder what he seems to be holding in his hand; is that skin? [Yes] Does it have medical or scientific purpose? [Yes, process called plastination, medical purposes. The pose: man is center, all-important.]
- Some of the parts don't have skin, and there are no blood vessels around some areas; why? [Plastination process, 20thC] (India female 30s)
- What condition? Sick? {ie. Has he been burned, or what happened?} Is it plastic? [plastination] What is it for? [medical purposes, learning] I saw a show in a museum about lungs, someone who smoked had holes in their lungs, very horrible. If you see it, you quit! (Middle-Eastern male 40s)
- What is it? [Actual plastinated human] (European-American male 40s)
- What is it showing? [Plastinated human] (African-American male 50s)
- Is it computer-generated? Or a clay model? [Plastinated] Oh my god, is it a real person? Who's been skinned? Wow! That's a real person. Obviously it's a man. I wonder how he died. [Left his body to science, done by a doctor] He doesn't look fat, or deteriorated. How did he die? My kids would ask: "How did he die? How old was he?" [I don't know.] (Asian-American female 30s, ranch/college)
- Is this the human anatomical project, where they sliced the prisoner? [German, plastination] Yes, I'm familiar with plastination. The genital area looks strange because the image is broken up. Have a better quality image. (African-American male 30s, medical doctor)
- What were they trying to depict with the penises? Is it supposed to be muscle? Looks a little out-of-sorts. Is it colored wrong? (all
references to penises}  [It's real, plastination. There is one penis, but the testicles actually do go up that far.] Isn't that interesting. Why is the skin left on the hand? [I don't know.] (European-American female 60s, high school teacher)

- It looks all very obvious, but I didn't realize the testes went up that far. What kind of image is this? [plastination] It's real? Wow! That's really something. Just ripped his skin off. It must be hard to do; it's all in one piece! Well, almost. A few cuts here and there. Fascinating. (European-American female 70s)

Explainers' responses:
- What are the parts? Label the muscles and tendons.
- Does he stand up by himself?
- Did the guy leave his body to science?
- Does it stink?

Now that you know a bit more about this image, what do you think about it, or feel about it?
- I don't know enough about the process {of plastination}; does it have a useful purpose? [Bodies and parts are generally used to teach or in museums] I would like a step-by-step explanation. (European-American male 50s)
- I don't know; it looks scary to me. I've never imagined myself like this, without skin. (India female 30s)
- It's good for people to learn about the body in detail; to learn about it is educational. (Middle-Eastern male 40s)
- Nothing in particular. (European-American male 40s)
- It sounds gross. It wouldn't be interesting, unless to medical students. Only they are comfortable with body parts. (African-American male 50s)
- It's a great way to learn about the muscular structure. Kids ask "When Indians scalp somebody, what does it mean?" or "If you took my skin off, would I bleed to death?" Yes you would, because all your muscles and veins would be exposed. Here they can see what it means to be skinned. (Asian-American female 30s, ranch/college)
- I like this image, but I don't think it will appeal to kids. The pose he's in is a "the victor" - type pose. It's rather offensive to me. (European-American female 60s, high school teacher)
- It's still amazing. Muscles are defined very well, especially over the shoulder. Interesting, very interesting once I knew more. (European-American female 70s)

Explainers' responses:
- Holding his skin is inappropriate.
- Really weird.
- I really want to see it and poke it.
- It might scare kids.
9) Functional MRI of Brain Responding to Images of Emotion

Could you tell me what your first impression is, when you look at this image?

- It's in color. I can deal with these. What's the difference between happy and fear? Oxygen levels? Brain activity? It looks like a monkey in the middle. Is it bottom-up? (European-American male 40s)
- The brain? Brain impulses? (European-American female 40s)
- Is this face sculpture? {ie. because you can see a face in the brain MRI; it looks like an alien, molded from clay} I don't know. (India female 30s)
- Brain scan, shows different parts of the brain and emotions. (European-Australian male)
- Brain scan. It's aliens (sees in negative space). Or monkeys. (European-American male 30s)
- Some kind of xray or CAT scan image, something like that. Looks like the brain. (Chinese-American female 30s, 4th grade teacher)

Have you ever seen anything like this before? Where?

- Yes, in books on neurophysiology. I don't see the same different they do (he points to numbers on the sides.) {He doesn't seem to be a total expert, but he does try to interpret the numbers and image in detail.} (European-American male 40s)
- This specifically, no. (European-American female 40s)
- No. (India female 30s)
- Yes, I've seen images of the brain on PBS and stuff. Pinpoint certain areas in the brain that do certain functions. (European-Australian male)
- No. (European-American male 30s)
- Yeah, x-ray. (Chinese-American female 30s, 4th grade teacher)

Explainers' responses:
(Note: approximately 2/3 had not seen an mri image before, by a show of hands.)

What kinds of questions come up in your mind? What would you like to know about this image?

- What was it taken of? [A human brain] Measuring the oxygen level? [Not sure; I believe it's neural activity] On the surface of the brain, or the activity of the whole area? A slice or inside? [A slice from inside, I believe.] How are they generating the emotions? [They show the person photos] Is it top down or bottom up? What's the scale? How old is the picture: 12th Century? (laughs) The other one had style and interpretation. This one is what-you-see-is-what-you-get. (European-American male 40s)
- What is it? [MRI, how brain responds to different emotions] (European-American female 40s)
- What are the different meanings of the colored circles? What exactly is this? [MRI, different areas of brain used in these emotions] That is strange; I was thinking that with fear, the brain would squeeze, and with happiness, you would expand. But it's not like that at all. (India female 30s)
- How can they localize what happens in the brain, the neurons? What function do they have? What sort of scan is this? [MRI] I'd like to have the left and right brain identified, and know how handedness affects the brain. If you have damage or if you are afraid of heights, can you do something to a part of the brain to get over it? Or aggression, in Victorian times, people were given lobotomies. (European-Australian male)

- Why type of image? [MRI] Of the brain? [Yes] So these MRI’s show different emotions in the brain? [Yes] Who is it? [I don't know.] (European-American male 30s)

- Why is it happy and fear? Must be chemical reactions in the brain. What kind of material did they put into the brain to show this result? [MRI shows brain's reactions to images of happy and fear. I don't believe they used any substance in the brain to get the image.] Is it temperature sensitive? [I don't know.]

Now that you know a bit more about this image, what do you think about it, or feel about it?
- I want to see more. I'd love to compare activity, such as an athlete who has just competed, to fear. (European-American male 40s)
- I think it would interest all ages. (European-American female 40s)
- To put it here, in an exhibition, might be OK. (India female 30s)
- People knew more about anatomy than the brain; it's good to know more. What pressures there are on certain areas of the brain, what does it damage, how complex your brain is, how vast is brain capacity: are we using 20% - 50%? (European-American male 30s)
- I think it's great. The technology is pretty impressive. (European-American male 30s)
- It's unbelievable! It's like a lie-detector; I'm skeptical. So many factors to the human brain. One thing determines happy? It doesn't seem real or true. (Chinese-American female 30s, 4th grade teacher)

10) Wax "Venus" from Italy, 1700's, Showing Internal Organs

Could you tell me what you first impression is, when you look at this image?
- Very visual; might be intriguing for the kids. (European-American female 40s)
- I don't like it. Because I'm not used to seeing an art image with a cut-away. One or the other would be fine, but not together. (European-American male 50s)
- Religious. Bleeding heart. Pretty good dummy. It's not real; it's too shiny. (European-American female 30s)
- Interesting. (African-American male 50s)
- Wow. I feel a little revolted. I like biology, but not this stuff. Dissection, wow. I feel sadness. It's such a beautiful body, cut up. (European-American male 20s)
- Quite interesting the amount of hair! The face is interesting too. Fairly realistic. The small intestines generally aren’t that diameter, and the large intestine doesn't look anatomical either. (African-American male 30s, medical doctor)
- It reminds me of an anatomy class. (European-American male 30s)
- Looks like Mary! (Chinese-American female 30s, 4th grade teacher)
I didn't realize the heart was in the middle. What is this? (points to various organs, asking what they are, or naming them.)  
(European-American female 70s)

* 14-year old ran away, apparently grossed out. 10-year old sat watching, which mother allowed.

Explainers' responses:
- The heart is too big; it's the size of her head.  
- It looks plastic.  
- Looks like real organs in a plastic thing; the intestines look real.  
- Her expression looks as if she's been strangled.  
- The organs are all a bit off.

Have you ever seen anything like this before? Where?
- No.  (European-American female 40s)  
- No.  (European-American male 50s)  
- Not unless it was in health science education class.  (European-American female 30s)  
- No.  (African-American male 50s)  
- No.  (European-American male 20s)  
- Yes. Plastic models, surgery, dissection. You can purchase remarkable models that you can take the pieces out. (African-American male 30s, medical doctor)  
- In textbooks. I used to take fine art, so I studied it a little.  (European-American male 30s)  
- Yeah. Human internal organs. But it's from the artist's point of view, not exactly real.  (Chinese-American female 30s, 4th grade teacher)  
- In doctor's offices, there are usually models on the desks. And diagrams and books on doctors' shelves.  (European-American female 70s)

What kinds of questions come up in your mind? What would you like to know about this image?
- I'd like to see it displayed differently, because the background brings death to mind. Why is it displayed that way? [17thC, medical, wax casting]  (European-American female 40s)  
- Why would somebody do it? [17thC wax model, cast from real organs, medical purposes.] I did not realize it was real! Well, not "real," but that it's not supposed to be art. It makes you stop and think about how they did it then: there wasn't photography.  
- That could be wax, huh? [Yes. Wax castings of real organs, 17th C] It's very beautiful. You eat, and the food goes all through the intestines before it comes out. It's a good picture.  (European-American female 30s)  
- When you look at it, it looks like certain organs are not shown, or have been removed. eg. the ribs; can they be shown? It's interesting that the intestines are longer than they should be. It could be more accurate. [wax 17thC, medical] Is it accurate? Does it come apart? [Yes]  (African-American male 50s)  
- It looks like it could be sort of real, like a model made of wax or something. [medieval wax casts of organs, artistic license] The body
is a squishy thing. The parts need to work together. I still feel kind of challenged. (European-American male 20s)
- Where is it from? How old is it? The style of the face looks old. [17thC Italian] What's this? It looks like a bilobed liver. I'd reject this because of that, unless you explain that the artist felt the anatomy was like this. Also I'm looking at the cardiovascular anatomy, and it looks close enough... Really, it depends on your goal. If your goal is to discuss the understanding of anatomy through the ages, by contrasting it with current models, then it might be very good. Otherwise, it could lead to misunderstandings of anatomy...It looks like real hair. Is it human hair? What is it made of? [wax, dyes, mutton fat, cast of organs] Intestines tend to expand after death, so perhaps that's why the intestines look larger. (African-American male 30s, medical doctor)
- What are the organs? What are you looking at? Heart, intestines, upper and lower, how many layers of skin? The setting is not a very textbook setting. Is it a painting or sculpture? [17thC wax, cast, artists and scientists together.] Why was it made? [Didn't have preservation techniques or plastic materials.] Oh, so it was for study purposes? [Yes. And different layers pulled out.] (European-American male 30s)
- Is it art? What is it used for?] [17thC wax, artistic license in colors, size and placement. Medical model.] It's not real to me; I see it as an art piece. Artistic exhibition of the human body. I would appreciate knowing how it is all done. (Chinese-American female 30s, 4th grade teacher)
- Where is the aortic valve? [don't know]. How was this made? [wax, organs] I think it's beautiful. I wish it was more accurate, that everything was depicted. For example, the bottom of the heart isn't attached to anything. Very interesting. (European-American female 70s)

Explainers' responses:
- Why is she flattened against that wall? Or is it a bed?
- She looks dead; if you're going to have a diagram instead of a picture, have it a little less real-looking.
- Seems artistic rather than factual.
- Is she real?
- Why does she look like she's been tragically killed?
- She looks like the virgin Mary.

Now that you know a bit more about this image, what do you think about it, or feel about it?
- Nothing one way or another, really. (European-American female 40s)
- Fascinating. Makes you think about what physicians had to do back then. We take for granted the technology we have now. (European-American male 50s)
- I think it's beautiful, interesting, and educational. I saw a cat once, with its guts hanging out. This is more pleasant. A little scary. Makes me think of child-kidnapping: maybe the children get cut up like this. (European-American female 30s)
- If this was an exhibit, it needs to be less real; it's too grotesque. (African-American male 50s)
- I'm fascinated by it, and still feel challenged by it. I'm feeling my mortality. When we think of ourselves, we think of our brain as "us." The body is small, and secondary. (European-American male 20s)

- It's quite rare; I've never seen anything quite like it. Photograph the whole thing; don't cut the head. There's quite a lot of Puritanism still existent, especially in Asian countries. Certain body parts are routinely not depicted, even in professional circles. If you're going to educate, then educate. Don't sanitize, based on somebody's shame pattern. (African-American male 30s, medical doctor)

- Will you have the actual model? [Yes, we hope to.] Nothing wrong with it. I'm not sure how kids would react. (European-American male 30s)

- I really don't feel anything. (Chinese-American female 30s, 4th grade teacher)

- It's educational. I learned something: the heart is in the middle, not on the side. My husband had an aneurysm and an operation for it. It's good to see accurate models. A friend of mine had heart valve replacement, and they had to go back in and put a tube in. I'd like to see more detail of the heart. Seeing this model opens your mind to curiosity. (European-American female 70s)

Responses to full set of images seen:

Looking at the three images you've seen, which of them do you find the most challenging to look at? What makes that one(s) so challenging?

- None are hard to look at. (European-American male 40s, 6th grade teacher)

- The hand, because of the wrinkles {perhaps meaning that he was old, and the wrinkles are very deep.}. The almost obvious interpretation that it is a hand. How did it get this way? (European-American male 50s, 8th grade teacher)

- For me, none of them are challenging; they're all interesting. (European-American male 50s, ~5th grade teacher)

- The skin man. Because I can't put it into a context, a frame of reference. (European-American male 50s)

- The face. I'm getting older, and I don't want to look like that. (European-American male 40s)

- The woman's body (wax). It's visually not something you see every day (European-American female 40s)

- Skin. You never imagine a body without skin. It's amazing. (India female 30s)

- MRI. Personally, you know what your brain does, but you really don't know, or you wonder what is it capable of? (European-Australian male)

- None of them. (European-American male 30s)

- The diagram. The body system, parts and organs. What is the most important organ in the body? What does a baby look like inside the body? (Phillipino female 40s)

- Thermograph. Because it's nice {ie. not hard to look at}; details and colors, all the body is there. (Middle-Eastern male 40s)
- Face. Because I never saw that before. You can really think about it. Who is it? Why did he die? Will I look the same? (Polish female 30s)
- The pacemaker. It's built to help out a human being with a difficulty of functioning. Without it, so many people have to die. (Asian-American female 20s)
- Actually, none of them. Because they're not offensive; they're fascinating. (European-American male 50s)
- Wax. There's so much to look at. It's interesting. For my hernia, I wanted to see pictures. When you see your inside, it is informative. (European-American female 30s)
- Skin, looks more like a work of art. What's challenging is trying to apply a theme to it. (European-American male 40s)
- All of them. The wax is least challenging, but none of them are comfortable. The hand and skin are morbid. I think of the sacredness of the human body; to look at it like this doesn't seem right. (African-American male 50s)
- Wax one would be challenging; it's so lifelike, imagery of a beautiful woman. Young and then dying. It challenges my mortality. And I have a revulsion for seeing "innards." I've always had a problem with intestines. And I have a phobia of cavities or punctures; when a bird drills a hole in a tree, it gives me the creeps. (European-American male 20s)
- Delivery. Keeping in mind that kids might see it, the other two images are dead, but this one is living, so it brings on other questions about sexuality, reproduction, etc., that they may not be ready for. Or maybe I'm not comfortable. Girls see themselves as giving birth, from early on, so this might be a difficult one to explain. (Asian-American female 30s, ranch/college)
- None. (African-American male 30s, medical doctor)
- The face; it was very real. The wax is gory, but you can tell it's not real, so it's easier. And the torso is easiest. (European-American male 30s)
- None were particularly offensive, or made me squeamish. (European-American female 39)
- Thermograph. With all of the colors, you can have many ideas in your own mind. I can look at it for a while. The diagram, I wouldn't give a second look. The skin would be interesting for older kids; they could write a paper on "Conqueror," or "savior," or "own skin?" Very proud-looking. He doesn't look evil; he looks haughty. (European-American female 60s, high school teacher)
- The hairy torso. Even though I knew what it was, a torso, I looked for a hidden image. (Chinese-American female 30s, 4th grade teacher)
- Birth seems the most real. I've never been through childbirth, but I believe it's very painful. The image looks happy, though. It's real, so that's what makes it scary. (European-American female 20s)
- The wax image, probably. Even though I didn't know what the pieces were, it's more interesting than the others. You can see more in the body. (European-American female 70s)

Explainers' responses:
- The face, because you maybe have never seen this before. (male 17)
- None of them were all that challenging because it's all just a part of life and I rather see, and know the knowledge of what scientist and doctors do than just hear about it. (female)
- Face or birth, because they’re powerful, blunt, disturbing. (male 17)
- Implants, because I did not know what was it of. It just something inside your body that but in challenging to tell what it is. (male 16)
- None. (female 17)
- I would have to say the one with the dead man's head. I found this to be challenging due to all the questions that immediately come up to my head, such as is this person dead, why is this person like this, etc. (male 17)
- If you're going to do the face one, you should also do an image from war, because that's where a lot of this happens. (male 17)
- Well I think that the picture of the head might be challenging, because it makes you think. Also it have parts that's visible and some skin and some is probably flesh.
- The xray is challenging to look at because if you never seen the xray inside of your body then you can’t tell what the picture is.
- Dry is better than bloody. We panic when we see blood, so dry is better. (male)
- Birth is too naked. You don't want kids seeing that, especially little kids.
- The face is real, more real.
- How much worse is this than a cow's eye?
- It's not human, so it's easier.

We're thinking of using them in our exhibition. Do you think any of them are inappropriate for children? Why?
- No, nothing offensive.  (European-American male 40s, 6th grade teacher)
- No. This is a science hall.  (European-American male 50s, 8th grade teacher)
- I'm not sure if the birth one would be appropriate for children; it's pretty graphic. (European-American male 50s, ~5th grade teacher)
- I’d be wary, although I don't have clear and readily visible reasons. But I think in the proper context, it’s appropriate for pedagogical reasons. (European-American male 50s)
- Nah, they'll always just walk away. The diagram one is most appropriate. My son is in 3rd grade, and he has an overlay book of anatomy. (European-American male 40s)
- No. (European-American female 40s)
- Probably not. (India female 30s)
- No. (European-Australian male)
- No. (European-American male 30s)
- No. (Phillipino female 40s)
- Some are scary. (Middle-Eastern male 40s)
- The face needs explanation; don’t just scare the kids. Birth is really educational, and you can see it every day on TV in hospital. It’s really important to see how we’re born. The torso too, but because it's nothing {ie. it's boring, so why would you do it.} (Polish female 30s)
- Maybe the breast one. It might give the wrong impression: "Mommy, do you have an implant?" It's not for everyone. (Asian-American female 20s)
- The wax one. Some people could be offended. (European-American male 50s)
- No. They need to know where food goes, how the heart works. There's not a bunch of blood. Exploring the body is good. (European-American female 30s)
- Depends on the context in which they're presented. Groups of kids feed off each other, so any of these could be a problem. (European-American male 40s)
- The birth one. A face with the process is personal, and not as educational. It's intrusive. Especially for kids; I'd have about 9 years of questions! (European-American male 50s, 5th grade teacher)
- Yes, all of them are too graphic. The wax one is borderline. (African-American male 50s)
- Wax one would be challenging, and the hand would be scary. We're not exposed to the blood and guts of life. Even in science, we use models. A chicken breast in stores is filleted, has no head, no feathers. The Japanese are more honest with food. (European-American male 20s)
- Delivery. Keeping in mind that kids might see it, the other two images are dead, but this one is living, so it brings on other questions about sexuality, reproduction, etc., that they may not be ready for. Or maybe I'm not comfortable. Girls see themselves as giving birth, from early on, so this might be a difficult one to explain. Also, the skinned man might be a little tricky. But maybe the kids wouldn't see it as a male/female thing; it might be just a dead body. (Asian-American female 30s, ranch/college)
- No, they're fine. (African-American male 30s, medical doctor)
- That's tough. I don't have children, so I can't really say. The face might give them nightmares. The wax person might be a bit difficult for them too. The torso is easiest, but it's also the most boring. (European-American male 50s)
- Some parents would find the delivery inappropriate, only because they'd have to explain it. My son is 5, and this might frighten him: if the baby is in the belly, why is it coming out here? I think children would find this face fascinating; my son is enthralled by skeletons. [How would you present them for children?] Maybe with the birth, you could draw a parallel to the animal world with puppies and kittens, but then they might think there are 6 coming out! With the face, maybe you could show half of it as a model first, in primary colors, and then this picture. (European-American female 39)
- I dislike the diagram a lot; it portrays racism: flat face, little eyes. Kids would resent it here. (European-American female 60s, high school teacher)
- I don't think so. (Chinese-American female 30s, 4th grade teacher)
- No, I don't think so. For young children, maybe. They'll ask you a lot of questions. Some children it might not be appropriate for. (European-American female 20s)
- The torso is true to life, but rather repulsive. Children wouldn't view the wax one as something they're want to look at; they wouldn't like organs. {her grand-daughter didn't seem to like the organs.} (European-American female 70s)
Explainers' responses:
- The face and birth are not appropriate for children to see. They may get scared. (male 17)
- Yes, the skull of the dead man and the birth of a baby. From ages of about 12 down. (female)
- Yes, birth and the face. Nightmares, scary. (male 17)
- I think the picture of the skull and the photo of the baby coming out is inappropriate for children. It is so nasty I think the parents children may dislike it. (male 16)
- People may think it's gross, but I don't think it's inappropriate for children it's something part of everybody's lives, it SCIENCE! (female 17)
- I would have to say the picture of the dead person. In this picture, though the doctor taking the picture may have had good intentions, I personally do not think children of around 2-7 will really understand them. It will more than likely give them nightmares. (male 17)
- The birth picture, is to graphic and shows very disturbing things.
- I think the giving birth is. Most kids don't know where they from. Inappropriate because they might be disgusted at a young age.
- I don't know. I don't think that children would understand them to much.
- Not 5 or below. Kids would get nightmares, and not understand.
- The face and the birth. Little kids have grandparents.
- The skin one is OK, because it's one step beyond naked, so it doesn't really matter.
- Birth: we're putting it out, and we don't know if parents will want their kids to be exposed to that. It's not dissected, it's alive. What would the label be? Maybe have a staff person there, or put it up high. We don't want to show pornographic stuff to little kids.
- The face is inappropriate for children. It reminds me of my grandfather. It might be scary for older people. People might get offended easily. If you've just recently gone to a funeral, it might offend you. And how about Jewish people and Mormon: they might be offended.

Do you think any of them are inappropriate for adults? Why?
- No. (European-American male 40s, 6th grade teacher)
- No, of course not. (European-American male 50s, 8th grade teacher)
- No. (European-American male 50s, ~5th grade teacher)
- No. (European-American male 50s )
- The face might bother my dad; he's 85. Not that he would come here... (European-American male 40s)
- No. (European-American female 40s)
- No. (India female 30s)
- No. I can't see why. (European-Australian male)
- No. (European-American male 30s)
- No. (Phillipino female 40s)
- No. (Middle-Eastern male 40s)
- No. (Polish female 30s)
- No. They know what the world is about, if they're in a normal state of mind. (Asian-American female 20s)
- I would hope not; I hope they would know enough! (European-American male 50s)
- No. (European-American female 30s)
- No. (European-American male 40s)
- Well, adults can look at what they want to. Or leave. But it’s not appropriate for a public exhibition. (African-American male 50s)
- No. (European-American male 20s)
- No. (Asian-American female 30s, ranch/college)
- No, they're fine. (African-American male 30s, medical doctor)
- No. (European-American male 30s)
- No. (European-American female 60s, high school teacher)
- No. (Chinese-American female 30s, 4th grade teacher)
- No. (European-American female 20s)
- No. (European-American female 70s)

**Explainers' responses:**
- No. (male 17)
- No. (female)
- No. They are more mature, can handle most things. (male 17)
- No. (male 16)
- No! If adults think these images are inappropriate than they're aren't very open-minded towards openly teaching people about this stuff and the human body. (female 17)
- Not really. I think that once the pictures are explained to the adults, they will come to understand the meanings and learn to appreciate them. (male 17)
- Explain to them. It might surprise them.
- No. Because adults see stuff like this every day. It shouldn't be too bad.
- The birth. When they see their kids are disturb by the picture, they would feel the same way.
- Well not inappropriate for adults. They seen in before. Mature about it. Some might be disgusted cause maybe they're seeing something that might be a little too off. But it depends on the individual. Most people is different point of view.

**Version A (just mentions "these images")**
Lastly, now that you've seen some of these types of images, do you think images of the human body affect how you see yourself?
- Somewhat. It's like looking from the inside out: what's going on in there? I love biology and biological processes. (European-American male 50s, ~5th grade teacher)
- Of course. You'll compare between a picture and yourself. You can't see inside of yourself, but in the picture, you know inside that you're the same thing. (Phillipino female 40s)
- I think so. (had to leave, male 40s MidEast)
- I always see myself very fat in the mirror (she's very thin.) If you put the torso picture on the refrigerator, it would keep you from over-eating. I was very fat as a kid; I love snacks. Kids in the U.S don't care how they look, I think. In Europe, skinny = healthy. (Polish female 30s)
- Not really. It doesn't affect me. It's somebody else's body, not mine. (Asian-American female 20s)
- Yes, they probably could, because then you think that we're no different on the inside, under our skin. But on the inside, we're not pretty. (European-American male 50s)
- Yeah. With my hernia wound, I could see fat layers, and it was interesting. But my doctor wasn't happy with all my fat layers. You don't realize: kids should learn early how to take care of their bodies and eat right. It's hard to change habits of eating fast food. This should be a food exhibit. (European-American female 30s)
- Yes. (European-American male 40s)
- How you think affects how you see things, not what you see. (African-American male 50s)
- Yes. The wax photo makes me more aware of what's in my body. We're an amazing machine; how it works is amazing. We have great technology, but nothing compares to the living. We can't even bring something to life from the dead. (European-American male 20s)
- Definitely. Especially when you look at a body that's been autopsied or broken down, you think about how your body works inside. Out of sight, out of mind, but when you see the living tissue, you think: "How will I look when I'm dead? Will I look as healthy as that skinned man, or will I be a rollie pollie blob?"
- No. (African-American male 30s, medical doctor)
- I think so. When you told me the theme, I wondered if you'd show me magazine covers, how we represent ourselves. Not just fashion but the same person at different stages of life: how their outward appearance affects how they're perceived. [And how do these types of images affect how you see yourself?] The wax one makes me think about what's underneath; the torso makes me think about health; and the face makes me think about mortality. (European-American male 30s)
- With body image, when you see pictures in medical books or science displays, you tend to dissociate from them: "this is not me." People are more apt to look at fashion magazines to draw the conclusion: "this is what my body should be." It's a split between the scientific body: how it really works, mechanical; and how your body should be: more of an aesthetic thing. It's a dichotomy. And when you see displays of the body in a science setting, you tend to dissociate from them. (European-American female 39)
- Oh yeah, definitely. Media images, they are stereotyping, makes you wonder how you fit in. (European-American female 20s)
- No, they don't affect you. (European-American female 70s)

Explainers' responses:
- No. (male 17)
- Yes, because it gives you a better perspective as what's going on with your own body. (female)
- Maybe but not really. Powerful images affect us all. (male 17)
- No, not really. (male 16)
- Yes. I know how my body would generally look if I do any of this stuff (ie. implants, pacemaker, give birth, donate my body for experiments, etc.) Besides the Human Body is a work of art it's part of History as well. (female 17)
- Doesn't really affect my thinking of myself. (male 17)
- Yes it does it brings up a lot of questions about the human body. (male 16)
- Yes. Because seeing these human body now you know how life is and how your body function.
- Well I don't think it affect myself since we all have the same stuff. See same stuff.
- I think it might make people take better care of themselves because they can see the different parts of their bodies.
- Some people try to take better care of themselves. It helps doctors know how to help someone. Helps me understand.
- No. (From the second group of Explainers, which was conducted verbally, they all agreed that it didn't affect how they see themselves.)

**Version B (emphasizes "high-tech images")**
Lastly, now that you've seen some of these types of images, do you think medical or high-tech images of the human body affect how you see yourself?
- Yes, definitely. When you look at the human face, you see humanity. (European-American male 40s, 6th grade teacher)
- Yes. I do see myself as a cardiac patient. I think of my heart in vivid detail. And I think how my body relates to my heart. (European-American male 50s, 8th grade teacher)
- Absolutely. Through this type of technology: thermographs, CAT scans, etc., we have an ability to understand human bodies. It's what scientific knowledge is all about. And it's appropriate to here. (European-American male 50s)
- Yes. When I look at the face, it's real, human. The others are more representative. The face is stark reality. (European-American male 40s)
- I do, but I wouldn't be able to explain it. Maybe, fundamentally, we're all the same. (European-American female 40s)
- Definitely. You get more real about yourself. Without your skin, that's what you are. (India female 30s)
- Yeah, with high technology you see how complex the human body is. You can explore the capacity of the brain: how much do we use? When and where? (European-Australian male)
- Yes. It gives you something to compare yourself to. (European-American male 30s)
- No. I think it gives you more information but it doesn't express our uniqueness. (European-American female 60s, high school teacher)
- No. (Chinese-American female 30s, 4th grade teacher)

**Version A (just mentions "changes in images")**
How about historically - do you think changes in images of the human body over many years might have changed the way people see themselves?
- Oh I think so. Pictures from 50-60 years ago were just front and center {ie., they were rigid, standard poses}; now they're more dynamic. It would be more interesting to have birth processes around the world, not just in stirrups. Like the tribe in Africa who give birth squatting, holding a pole in front of them. (European-American male 50s, ~5th grade teacher)
- No. Even though time goes by, it's the same thing. Old body, young body: they're the same thing. Young are stronger than old, but it's the same bodies throughout history. (Phillipino female 40s)
- Definitely. (Middle-Eastern male 40s)
- 20 years ago, you wouldn't see such images. It was taboo. If it's not taboo, you feel more confident. In Krakow, Poland, there's a Catholic church with coffins underground that are over 300 years old. Because of the climate, the bodies look like they died
yesterday. You can lift the lids and look at them. (Polish female 30s)
- Definitely, especially the breast implant. Because that's possible. When your body image changes, it can change your life. It's kind of weird: stereotypes going on and on about big breasts. Before, women's figure was very different. Technology makes anything possible, surgery and implants. (Asian-American female 20s)
- I don't know, probably. (European-American male 50s)
- Yes. I feel sad today for models who starve themselves; you should look at the inside first, not the outside. (European-American female 30s)
- Yes. (European-American male 40s)
- I don't think so. Other factors change the way people see themselves. (African-American male 50s)
- Yes, absolutely. The paradigm of group consciousness. In the Dark Ages, you never saw a 'body'; everything was covered up. People still had sex, so they knew what the body looked like! Fundamental religions don't use sexual images, due to the complexity of it. (European-American male 20s)
- Yes. Socialistically, beautiful people or thin people are assumed to be more successful and reliable. Through history, images of healthy women have gone from large to emaciated, but neither is really healthy. In current times, the correct image isn't about being fat or skinny any more; it's being healthy and athletic that portrays a successful person. (Asian-American female 30s, ranch/college)
- Yes. With modern commercial soft-porn advertising, it has. And the standards of beauty have changed as part of that, and how people feel about themselves. I think you do a real service if you help people understand that what we've always done is compare ourselves with ads. Looking at Rubinesque/Renaissance images, you see the difference. And this is especially a problem for teenage girls, but also teenage boys, if they don't look like the images they see. (African-American male 30s, medical doctor)
- Yes. These days magazine covers and TV, etc., they're much more accessible, and that affects how people see themselves and value themselves, eg. fat, thin, haircut. For example, women's bodies have changed a lot over time in terms of what's found attractive. (European-American male 30s)
- Yes. Even though you have isolated incidents of "This was the ideal body 200 years ago," you should do more to show how individual perception has changed. Why are people so caught up in their body images? Taking a more active role in their health and diet, etc., but people weren't so concerned about their fiber, bodes, etc., 200 years ago. Everything that passes their lips has to be FDA approved! And yet people are less comfortable about their bodies than ever before. And 10-year-old girls are bulimic - it's atrocious! Maybe they don't understand how their body really works - if you deprive your body, what will happen to it. Maybe you could show, on a timeline, 200 years ago, the ideal body was this, and now it's this. The Europeans have a very different perception towards their bodies. They get more daily exercise biking, etc., walking, and they're so much more relaxed about their bodies than in the US. Another thing is that as you get older, you change in terms of what's important. I'm going to be 40 next year, and I don't want to be spending 2 hours a day in the gym. You can't push your body like you used to. And other things become important for your time. Don't
push it: enjoy it. People exercise here, and hate it. It hasn't been incorporated into the lifestyle. Although that's probably a sweeping judgment about everyone in the US. But the quality of life here is much better than on the east coast, and people are happier here. Is it the weather? environment? We know people who are chronically ill, who're also chronically depressed, in New York, and I wonder if that's what causes it: does their depression make them ill? (European-American female 39)
- Yeah, probably. How images of the body in art have changed. (European-American female 20s)
- Probably. At the doctor's office, you now see more pictures. Years ago, there were just skeletons, if the doctor could afford it. now there are more body parts and models. My doctor had a heart model, and the eye doctor had eyes. Now doctors say "This is where your problem is; this is what it looks like," but not until you get the ailment! (shows a picture - an ad for orthotics - from her wallet of foot bones, including a line she has drawn where she broke her foot.) It's easier to understand with a picture; I made this to show my friends more easily. (European-American female 70s)

Explainers' responses:
- Not really it just helps you more to understand your body how it works. (male 17)
- Yes, because to me since people have more knowledge, they (some) try to take better care of themselves. (female)
- Yes. Now we basically know how our body functions back then (1600s) people were punished for dissecting people. (male 17)
- I think maybe a little bit but not a whole lot. (male 16)
- Yes. With all of this technology and general models and picture it helps to understand the body. And it helps record history for future use. (female 17)
- In many ways it comes to show just how fragile the human body really is. (male 17)
- Not really, because all these are natural. It's different from war, being killed or murdered.
- Yes, because the Egyptians used to use heavy makeup. How different cultures have used different things.
- Now we're just a bunch of cells. Before, you'd think of yourself more spiritually.
- No, we've always grown up with the images.
- Society puts out a picture of how things should be, and you accept it without thinking, you accept what society gives.
- Teenagers aren't very aware of how they see themselves. Is anyone? As you get older, you become more comfortable.
- It gives you a better understanding of your body. It's incredible, if you're sick you can understand what's going on in your body.
- Now you can't imagine. There's no more myths about demons. But a lot of that disappeared in the last decade. MRI's just add, they don't take anything away.
- There's still a lot we don't know. We're just one step ahead.
Version B (emphasizes "technology for making images")
And now I'm thinking historically: Over many years, there have been changes in the technology for making images of the body. Do you think those changes might have changed the way people see themselves, now versus in earlier times?
- Definitely. They explore the body so specifically now, even compared to 40 years ago, or even 20. We know minute details that change our appreciation of life. (European-American male 40s, 6th grade teacher)
- Oh yeah. What you see with your eye is hard to challenge, especially for young children. (European-American male 50s, 8th grade teacher)
- Oh yes. The first diagram was a sketch, not accurate at all. Now, with our increased comprehension and technology, we appreciate our bodies more, and know more. (European-American male 50s)
- I don't know; I don't think so. (European-American male 40s)
- Now it's more explicit; there's no real mystery. (European-American female 40s)
- Definitely. There's more detail, more access. Nowadays, technology is so wide, nearly everyone can see. Before, not everyone had access. (India female 30s)
- Oh yeah. With technology we see how complex we are now. The diagram was on the right track, but not accurate. But now, we see the smallest details. It makes you think. (European-Australian male)
- Yes. With today's technology you get a closer look, it's amazing. (European-American male 30s)
- Oh yeah. There's a lot more knowledge. People are now more concerned, more aware. It's not a big mystery. (European-American female 60s, high school teacher)
- I think so. In different periods of time, we saw the human body differently. In the past, being overweight was a sign of health and wealth. Now, to be healthy, you must be too slim. (Chinese American female 30s, 4th grade teacher)

Explainers' miscellaneous suggestions:
- Don't be too wordy in the explanations.
- Warn people about little kids, and make sure they can't just run in, without a parent.
- Don't have it in a dark room. It's too eerie/scary and focuses you right on it.
- You could say "You can't go in here without an adult." or "Some things in here wouldn't be suitable for your children."
- Have Explainers staffing the area, and they could take polaroids of interesting tattoos, etc. on visitors.
- What about tumors? Siamese twins?
- What about deformities of the body?