

ANATOMY INTERVIEWS SUMMARY

COMPLETERS (both) 1111111111; (one) 1

1. Why participated

The majority of students who completed the creative projects did so primarily because they liked doing creative things. These students also invariably described the idea of doing the project as “fun.” However, a significant subset acknowledged that they completed the projects mainly for the extra credit. One student each also mentioned the value of self-expression, relaxation, introducing humanism into the anatomy course, and as an outlet for emotions generated by the course.

- a. “love doing creative things” 11111; “I’ve always been a fan of poetry and this was a wonderful outlet for me to express myself from an academic standpoint”; “I think in med school, you don’t really, sometimes you have to make yourself do things, like there is no real reason for me to draw, then I’m not going to do it. So it’s a good excuse. And it was fun, you know, a way to express yourself”; “I always loved writing and reading poetry.. I kind of had an idea for a poem for a long time.”; “I enjoyed doing creative writing””; “I’ve always been an artsy person
 - b. fun 111111
 - c. self-expression 1
 - d. extra credit primary 11111 “I just sort of covered myself in case I needed it”; “...really the main reason was just the extra points in the class.”; “It was something easy to do, it was kind of fun. But mainly, you know, it was a couple points of extra credit that I needed to get.”; “I did it for the extra credit... I thought it was a good idea to safeguard my grade...”
 - e. extra credit an incentive, but secondary 111;[Interviewer] “And was the extra credit a little bit of an incentive? “That’s true, but I don’t think, like I didn’t really need the extra credit.”
 - f. break, relaxation 11; “[It sounded] like a good break from the hard grind of regular school”; “it’s something different from school work”
 - g. reflection 1
 - h. humanism 1; “It brings a little bit of humanism into dissection”
 - i. outlet 1; “I’ve never been around a lot of medicine, so coming into anatomy, and, um, dissecting the body. It’s kind of a shock, and it’s a good outlet...”
- 1a. Why just one?
- a. Had enough points 1; “I wasn’t in danger of failing the class”
 - b. Lot of other work 1

2. Medium chosen

The majority of respondents completed both projects, and chose to use the same medium each time. The media selected in order of frequency were poetry, drawing, and essays. The reasons given for choosing the same medium varied. Approximately equal numbers of students stayed with the same medium because they enjoyed it; because it was the easiest for them; and because they felt it gave them the best means of comparing their thoughts and feelings at the beginning and at the end of the course. The two respondents who chose different media did so because they wanted to experiment artistically.

- a. Same 1111111111
 1. Poetry 1111
 2. Essays 11 (1-single project)
 3. Drawings 111
- b. Different 11
 1. Poem and drawing 11
- c. Why same medium? (likes medium 1111; easy 1111; comparison 1111)
 1. "My love of poetry and writing. Plus I wanted a written account of my pre- and post- anatomy experiences"
 2. "Why did I decide to use charcoal for both? Probably because charcoal is really easy to use"
 3. "I felt like the purpose was supposed to, you know, see how your view has changed since the first time, so I felt it was kind of logical to do [the same thing] the second time around too."; for cohesiveness; also quicker; "I kind of had some ideas floating around for that one [#2] too"
 4. "Well, honestly probably I thought I can write a poem in less time than writing an essay or a short story, but it turned out it takes a long time to do anything when you're trying to make it perfect."
 5. "It was really easy for me to write the first time, and it showed an interesting way I was thinking about anatomy... if you compare the two writings, it shows how my views changed throughout the course, so..."
 6. "I'm not artistic, and poems are kind of fun. You can say a lot without writing a lot... you can hit a lot of main points with a poem, umm, and, umm, and you can make it flow, and at the same time, you can be descriptive without having to write a story."
- d. Why different media?
 1. Like doing creative projects, so wanted to take advantage of using different media 1
 2. Curious about writing poetry 1; "I never wrote a poem, and I know a lot of people in my class were doing it, and I, you know, I thought I should give it a try..."
 3. Wanted to try something different 1

3. Differences between projects

Most of the respondents saw clear differences between their two projects. Some (111) reported that the first project was more emotional and personal; others that the second project was more emotional/personal, a deepening of the ideas and feelings explored in the first attempt (11111). For some, the first project was focused on their initial reactions to anatomy, while the second project was more of a synthesis of the entire experience. Students tended to spontaneously describe their projects as more or less emotional and personal versus more or less technical and aesthetic. A few students noted that the progression from project 1 to project 2 showed a greater grasp of anatomy. A few students did not detect any meaningful differences between their two projects.

- a. 1st project reflected own emotions; 2nd project based more on the physical body; reflected my attitude toward anatomy, and was a synthesis of experiences had throughout course
- b. “1st project reflected how I thought the cadaver felt about our group; 2nd project reflected my feelings of thanks toward the cadaver; 2nd project more personal” 1
- c. 1st one was “this big picture of this naked guy... like I didn’t know anything about the body, so I was like looking at a book, or asking friends what’s this muscle. Some of it could be wrong... And the second project, it’s the same medium, but instead of it being like art and trying to bring anatomy into it, it’s more of anatomy focused I feel.” (Interviewer: “So the first one was art and you put anatomy into it. The second one was anatomy that you kind of made into art?” “Right”).
- d. “The first poem, I think it’s a lot more thoughtful and more dramatic, I guess. It probably had a more personal meaning to it. Like I was drawing from my own experiences of looking at old people, and also it was more about my whole being in medical school... how I was feeling kind of lonely that time of year, whereas the second poem was more light-hearted, it was kind of superficial, a kind of play on words, it’s more kind of a more aesthetic; it’s a poem about aesthetics than emotions or feelings... It was more distant in terms of... like considering how anatomy impacted me. I don’t think I really delved into that, so... yeah... Personally, I like the first one better... but the second one I like because it’s more of a play on words... it’s just more a fun thing, I guess, than a personal meaning thing.”
- e. “I think the second project was a little more refined... I may have been more proud of it or I just did a better job the second time around... it would be more on the spiritual, artistic side.” “The first part, I think I had the opportunity to, to kind of explore superficially what kinds of ideas I had. And the second project, I looked back at the first project and took what I thought of some of the better... ideas from the poem to use”
- f. 1st project and 2nd project – essays from point of view of cadaver “[The 1st project was] introducing the idea that the cadaver was

aware of what is going on, and just aware of how students' feelings changed, from the first day of cutting to...uhh..later on...Well, I think the second one was more angrier... just the potential for students to take advantage of... just to sort of take things lightly [with the cadaver]... I think part of it was that we were, you know, picking apart this body, throwing a lot of things in the trash. So from the cadaver's point of view is this being used wisely?...I don't think anything was too insensitive. So, I don't think anything was wrong with it, but just from, if the cadaver was aware of what is going on... just from the cadaver's point of view, is it acceptable?...part of it also was just to keep in mind that the cadaver was teaching the student something about, like as a tool. So keep in mind that this is a great tool."

- g. 2nd one a little better: "Like the first, my first project was about my apprehension about the class, and I really took time to think about it... the second one, for me, was more about closure."
- h. (single project) "The first time I went and saw a cadaver. That's what I talked about, and what I wanted to talk about was I thought it was gonna bother me a lot to see a dead body. I was surprised a bit to find out that it didn't really bother me. So, I just wrote about my feelings, and why it didn't bother me."
- i. "The first one was a lot more emotional...So I did it because I kind of, I guess... that whole thing of trying to dig into it [my feelings]... The second poem was more, um, the progression. Just us being used to just being in an anatomy lab. Like, it's not a big deal anymore, as opposed to the first one was a lot more emotional... [Interviewer] "Was it more emotional when you did it or the topic in your poem was more emotional?" "Both."
- j. Wanted to compose a choral mass – "I guess I could hear it. So it's very rhythmical, very primitive feeling. But at the same time, reverent and celestial and sort of at the human essence."
(Actual projects) "Not much difference. The first one was of a lab and an actual tank... and there was like an angel's reflection on the first cover and there was a rose and an angel somewhere else. And it was just more like... I think I was shocked... I was shocked by lab in general. I had, I couldn't deal with actually cutting and the brutality of like you know cracking ribs here, you know, cutting through the chest plate and pulling it off... it is barbaric... the second drawing, it's probably about like human brutality and stuff..."
- k. "The first essay was about like, um, like the hand, dissecting the hand. [I selected the hand] "... just because it's like, it has like the most functions of, in terms of, ... there are a lot of functions that you can do when you think of the hand...[Interviewer: "Is it that the hand is the most humane part of the body?"] Umm, not really, it was more because it was the most functional part.... I think part of it was like if someone was missing a hand, you would know it right away..The

second essay was about like the cadaver, like listening as the students were talking... I thought about what if the cadaver was still alive. I think I took the second one a little more seriously than the first one, like when I wrote it, I may have put more time into it... it's more emotional for me, I think, than the first one was. Like I was more emotionally involved in it than the first one."

l. "Coming in the first project, anatomy was new to me. The whole experience of, um, like kind of separating yourself... and treating the body like a learning point... By the end [2nd project] I ... have gotten to a point where that was easy to separate myself from the body. I did my dissection, and it wasn't like a person that was there."

4. Meaning of project

- a. The project is focused on "the anatomical parts on the person. And so I didn't have a live model or anything so I just took a photography of myself and drew it on me. So it became a self-portrait. [But] No one got it; it's really really sad. All they see was the person... Ok, that's a nice anatomy project, but they don't like, I'm trying to make it as bold as possible. Everything that the person has on was a part of anatomy... I just thought wow designers could use it, yeah."

5. Project helped learn anything about:

Almost all the students who did the project felt it improved their self-awareness. The nature of this self-awareness ranged broadly from becoming more aware of personal feelings such as sensitivity toward death, appreciation of the beauty of the human body, respect for others, curiosity about learning anatomy. Others talked about self-awareness more broadly as a process of reflection, in which they could process and analyze a range of feelings triggered by the anatomy course. Usually those students who responded affirmatively noted that they perceived the cadaver as their first patient; while students who responded negatively said that, for them, the cadaver was just a body. The individuals who replied in the negative explained that they were already quite self-aware, and completing the project did not add anything to their existing level of self-awareness.

A smaller number felt the project gave them additional insight into the doctor-patient relationship. Those who did so mentioned increased respect for the patient, the importance of emotional connection with the patient, the importance of having empathy for the patient's subjective experience, the critical skill of being able to interpret both the medical and emotional *meaning* of a patient's symptoms. Students who did not find the project helpful in understanding the doctor-patient relationship explained this by saying that they did not regard the cadaver as anything more than a body, but noted that anatomy as a whole did teach them about the relationship.

The majority of completers also agreed that the project helped enhance their empathy, whether for "the living world," for patients, or for fellow students. In

terms of patients, the predominant idea seemed to be that patients are living, experiencing beings who must undergo the ordeal of illness. For other students, responders most often reported greater empathy for the progressive desensitization that occurred in their peers, a greater understanding of *how* that process happened. An equal number felt the project did *not* increase their empathy. Again, the two most often-cited reasons were because they did not regard the cadaver as human; and because they already perceived themselves as highly empathetic individuals.

Some of the respondents felt the project had increased their spirituality, either by reinforcing or clarifying their beliefs about the body, the soul, and the relationship between the two. A larger number of students did not report any influence of the project on their spirituality. Some of these responders simply said they weren't very spiritual people. Others commented that they thought a lot about spiritual questions during the process of dissection itself and throughout the anatomy course as a whole.

About equal numbers of students reported that the project did or did not help them think about death. Those who responded affirmatively noted they used their project to clarify their thoughts about dying and mortality. They saw more clearly that death was the endpoint, not only of doctoring, but also of life. Students who responded negatively either reported thinking a lot about death already, so that the project provided no further elucidation; or that they just didn't think at all about death.

Equal numbers of respondents also reported that the project either did or did not help them learn something about the medical profession. Positive responders mentioned issues like the importance of empathy and respect. They also commented that the project helped them realize how sometimes physicians can concentrate on the wrong issues from the patient's perspective; and how important it is in the profession of medicine to reflect and process one's feelings.

Most students did not think they learned anything about anatomy per se from the project. Negative responders simply stated that their project focused on the emotional not the informational aspects of anatomy. A couple of students commented in retrospect that they thought integrating anatomical terms into a poem or drawing would have improved their learning process. One person who responded positively to this question in fact had done precisely this, by incorporating anatomical words into a drawing of the face. Another positive responder noted that s/he learned something about anatomy from seeing the projects of other students; while a couple more students stated that the project reinforced their ability, acquired in anatomy class, to analyze the anatomical structures below the surface of people whom they observed in situations outside the lab.

Similarly, most students replied that they did not learn anything about the human body from completing the projects. Those who did answer affirmatively expressed additional appreciation from the project for the beauty and intricacy of the human body. One student mentioned that as a result of the project, s/he had developed a greater understanding of the transience of the human form. Most students who denied learning anything from the projects about the human body expressed similar views to the student who said: “Not from the project. But I learned loads from anatomy!”

In addition, one or two students each mentioned that, as a result of the project, they felt they were more attentive, could pay better attention to details, were more curious about anatomy, were more comfortable with dissection, and had greater “ownership” of the course. Two students felt that the project had honed their interpretive skills, and helped them tease out the meaning behind physical things. One student described doing the projects as therapeutic and healing, while another said that doing the projects brought closure. A handful of completers noted that, as a result of viewing the projects of their peers, they felt closer to them and had developed a greater appreciation for their talents and multidimensionality as people, and also understood them better.

About half of the noncompleting students spontaneously made positive comments about the value of the creative projects. The most frequent reason they offered was that it was a good opportunity for people who “liked that kind of thing.” Two students mentioned that seeing the projects had provided them with an important way of understanding and processing their own feelings about anatomy.

a. Self-awareness

Yes 111111111; “it helped me realize my own sensitivity towards death and also helped me appreciate the beauty of the human body”; “I became more aware of the respect that I naturally regard patients/people with”; I think the first one was really a reflection of my curiosity wanting to learn anatomy... I was excited about it, maybe I don’t know the functions of these muscles, but I can, I know I will know by the end of anatomy”; “I never took time to sit and think about how I felt about anatomy in lab. It’s easy to block out, and focus on, on the tasks, and the projects made me sit and you know really uncover what I was feeling or what I should be feeling from being in there... It definitely got me back in touch with some, with feelings and emotions that I didn’t want to think about...”; “Yeah, I think it helps a lot. I mean it just helped me to step back and reflect on the class. It’s probably, I wouldn’t have sat around and thought about the class if it weren’t for the project, you know... also just helped me address my feelings about, like working with cadavers...”; “I think it’s helpful... when you have to write out on paper, you kind of make a coherent thought out of it, and in doing that, I think that was helpful in that I saw a little bit more what I was going through, I guess,

when you can actually, you know, write it down and read it to yourself.”; “Yeah, I think [the project] definitely [moved me] toward self-awareness. It’s like... putting your thoughts and stuff down on paper makes you kind of, umm, understand more clearly, I guess, and develop them more. So it made me think more about what I thought about anatomy as I meant through the course just in terms of like, you know, what it meant to me to be working on this body or whatever.”; “I think it helped me because I actually, for the poem, I spent a lot of time just reflecting, and I think that helped me to have an awareness... let me express how I was feeling about the, the whole class and everything.... So what I learned, um, what I thought was it was going to be easy for me to really, to go in there, you know, um starting cutting and stuff. But I learned from writing that I had a lot of emotions that I hadn’t addressed.”; “I think it has taught me like, um, [to] think what you feel at the moment because usually with the whole rush of med school, you’re just going through the motions, and doing something like this, such as the project, gives you a chance to, um, to kind of reflect on [feelings] that you wouldn’t have before.”

1. No 11; “For me, I’ve been pretty aware of how I was feeling and throughout the whole experience of lab.”

b. Doctor-patient relationship

1. Yes 11111; “that respect is absolutely important in the doctor-patient relationship regardless of any factors (age, illness etc.)”; [the project helped me] connect the whole anatomy class to real people. These are things that you see on real people and they will be on your patients, on yourself, and so that’s a tie to real life... In the end, you will be working with patients, right? And how does, you know, a deformed [minuet?] affect them or how does a problem or something somewhere affect a person.”; “We’re not just... computers that sort of, you know, interpret data somewhere and react to it. So, and I think that’s one of the great things about being a doctor is that you [just don’t take in information], and give output, such as like a diagnosis or whatever or a prescription... you have to add an interpretation to it”; “It’s sort of our first patient, you know. This is the first; it’s a real human, you know, and you have intimate contact with it.... So you have to get comfortable with the idea of being close and touching and working with people, and I think that’s, it’s [the project] a good introduction to that.”; “It gives you a good idea of that... there’s like a fine line where you separate from the patients, and you also have to treat them like an actual, like they [cadavers] were an actual person, or they [patients] are an actual person.”
2. No 11111; “I wouldn’t say it doesn’t, but I don’t think it’s particularly strong in that way... In anatomy generally, you learn about the doctor-patient relationship...um...having... have that intimate relationship with the human body.”; “You know, not

really at all because, the first time, you know, these were just bodies to me.”; “I don’t think it was reflected in my drawing... but they are your first patient because there was no other way to see, to teach, you know, what it’s like.”; “I don’t think I saw [the cadaver] as my first patient or a patient in general, but I did, um, I did see it as someone who once was like a patient, I guess, and, um, it was kind of important for me to respect that level...”

c. Empathy 111111: “By forcing myself to sit down and think about the deeper aspects of dissection I did feel a closer connection to the living world”; “Yes, I think any of the emotions that you need for the doctor-patient relationship are going to have been perpetuated by the project because you have to think about how you feel, so empathy, the relationship... yeah.”; “Like how the students’ attitude changed over the course of anatomy class, and that was me as well... at first, maybe a little bit scared... You’re just amazed you’re actually working on the human body, and then later on, it doesn’t seem like it’s such a big deal. The body becomes less and less human the more it is exposed.”; “Yeah, because as you get later into the course, I’ve noticed myself like, even more so, it doesn’t even faze you... Along those lines, you see these grotesque [things], sometimes you know, either myself or my friend would make a joke about something. Maybe about the cadaver and, you know, you laughed at first, and then you stopped and thought for a second – This, this was really a living person, and it’s not really appropriate to be making jokes.”; “I don’t think toward the patients, but... you develop empathy for your peers...”

2. No 111111; “Not so much, like, that’s what I was saying, because my patients, my patients, I’ll always have empathy, they’re alive, they’re here, that’s their bodies, and I felt that in anatomy lab, this was just the bodies, just the bodies and nothing else.”; “I don’t think it taught me, I think it’s just another outlet for it. I like to think I’m always empathetic.”

d. Spirituality

1. Yes 1111; “I believe that there is a spiritual component to humans and that after death their body is more of a vessel”; “It does on a level concerning spirituality. That’s what I was getting at, and if you know that you’re spiritual then you’ll know that this is just a body... I didn’t know that I have a firm belief in somebody’s soul, but I realized that I have that, you know.”; “I think both of them were emotional/spiritual for me...it pushed you to think what you actually believe in because you can read about a lot, about everything, but what is actually true for you, you probably wouldn’t think about it, until you’re asked to do something [like creative project].”

2. No 111111; “I think I did most of my thinking about those issues while I was dissecting...wow... these people’s bodies. Not so much with um the art projects. It might have been part of what made me want to do the art projects or what I chose to put into my art projects, or just recognize the beauty of things... It’s the whole frame of mind where I was like this is

somebody's body, and I'm going into it, and I'm looking, and I'm a Christian so in some way, the spirituality part was like this is so beautiful and God made it this way, and I almost wish that we could see how beautiful it is in the inside rather than the outside because there was so much more hidden in there."

e. Death/mortality

1. Yes 11111; "death is nothing to be afraid of; it is quite peaceful"; "Like just thinking about doing the project, like taking the time to do the drawings made you think about death."; "It forced you to consider what happened to your body when you die, and what you want to happen."; "I put together a bunch of collection of, um, prayers and poems to help me, to help myself go and deal with the aspects of dying and death and continuation."; "[It made m realize] just the actual act of dying can translate into the doctor-patient relationship end, kind of, umm, being aware that was kind of the endpoint that everyone has to face...so I think for me, [it helped me see that] maybe death is the more everyday part."

2. No 11111; "I don't think it made me more fearful or made me think more about my own death or anything."; "No, I have always thought about death, so it [the project] it didn't teach me anything new."

f. Medical profession

1. Yes 11111; "the importance of respect and empathy"; "Well, if I were to stretch, because I want to say that there is. It's hard to say there isn't any... I have to say learning from my peers, and seeing what my peers did... and some of the things they have written."; "I think it taught me a little bit about how people sometimes concentrate on things that they shouldn't concentrate on, [as doctors]"; "I think it taught me that it's important and like for anyone to kind of take time out and reflect on what you're doing because if you just go through the day and just don't, just treat your patients like a nine to five job, there is so much emotion that you have inside that you can, that needs to be addressed. So it's a good way to, ah, to, ah, let it out I guess."

2. No 11111

g. Anatomy

1. Yes 1111; "anatomy is the study of the human body but there are real people who lived amazing lives behind the technical terminology..."; "other people's creative projects helped me to learn more about anatomy, and the functions of the human body."; "The second one, I think. My second one was a drawing of a face. I used like words to actually draw the face. So, in that way, I had to do a lot of reading just for the project... like it helped me to have more of an appreciation for [the learning process], but as far as memorizing, you know, different parts or nerves or anything, it didn't really do that."; "[Project helped me] when I see a person, and I see the surface anatomy that I can pick out everything."

2. No 11111111; "I didn't really try ah... putting in a lot of jargon

from anatomy. It would have been a good idea though...[to] learn more.”; “My projects weren’t really [anatomically related], for me, it was more of a creative, social thing.”; “I don’t think that I learned anything about anatomy specifically... learning this nerve goes here, here, and here, the project, I don’t think it aided in that at all.”; “My project had nothing to do with the actual, you know, technical anatomy at all.”; “The technical aspect of it, I didn’t feel like drawing.... I felt like there was no need to go there.”; “No, since I wrote an emotional essay, not really.”; “That probably would be a good idea. Probably if I were to write it over...”

h. Human body

1. Yes 1111; “I really had an appreciation for the intricacies of the human body”; “it is amazing and intricate”; {Interviewer} So is that mysterious beauty that’s inside that only people like us get to see really. People actually cut beyond the surface” “Yeah, that’s right.”; “I guess the body in terms of being a transient thing.”

2. No 11111111; “Not from the project, but I learned loads from anatomy!”

i. More attentive 1 “I’d say it helped me to be more sensitive, like it helped me to look closer at things...”

j. More exploratory 1

k. More meaning-oriented 11: how to interpret things; “[how] to extract meanings from very physical things, so... meanings in terms of emotional meanings or philosophical meanings, that kind of stuff.”; “It’s the kind of class that people really want to, ummm, have like another dimension to it because it’s just such a meaningful [experience]. I mean it’s not like you’re just reading something out of the book, you’re actually working with cadavers.”

l. Increased ownership 1: “It also made anatomy more personal for each person who did the project. So I guess you kind of have ownership of something that you’ve done. “

m. More comfortable 1; “I don’t say this for me, but if someone doesn’t necessarily like anatomy, but they like painting or something, and you do a project around anatomy, it makes you feel more comfortable with the subject.”

n. Deepened understanding of peers 11; “It exposed me to some of the feelings and emotions of my classmates that I didn’t understand. I saw them expressing them, and it made me feel closer to my classmates... because you kind of share something intimate when you write or sculpt something or sing something, like make a collage like some of the people did.”; “It’s a really cool thing, especially the fact that the projects were displayed later... it’s really neat to see that, to see everyone’s talents... it’s really cool. It reminds you that like they’re not just,, you’re not just a group of people sitting around reading books, you know. You’re like actually have some depth.... {Interviewer: “Did it bring you closer to your classmates in any way?” – I kind of thought so, yeah. You can be like walk up to someone, and be like wow, what a great project. Maybe you wouldn’t, you know, you wouldn’t have that platform to talk to them otherwise.”

o. Therapeutic 1: “It’s a really personal experience for a lot of people, and so, um, like I think...stuff like this or like, you know, at the end of the quarter, we had a couple of group discussions, and people, it’s just another outlet for people.”

p. Self-expression 1: “It wasn’t about me learning about myself, but me expressing who I am, how I see it... I definitely think that it was more, it was more like here’s what I think of this situation and, um, and I guess it was a bit of frustration with people that are too obsessed with bodies... I mean I feel like it was always people that were so sad about the bodies or whatever... I’ve never had one emotion about the body.”

q. Closure 1: “Yeah, kind of. I think just having the chance to write down what you’re thinking about, it does provide some of that... like being able to put down on paper like how you’re like, you know, because even if you pick one thing to write about, it kind of, uh, it was an expression of a lot of emotions that I had during the course.. So, to be able to put that on paper and, uh, like kind of flush it out, you know, like... it allowed me to kind of feel like, you know, that is what I needed to say...”

5. Did project reduce-anatomy related stress?

Most of the completers agreed that completing the projects did reduce anatomy-related stress, or stress in general. They saw the project as a relaxing break, a way not to burn-out, a calming, tension-releasing experience, and a means of attaining a different, and healthier, perspective on anatomy. Students who did not feel it impacted their stress level seemed to separate creativity from stress reduction, and did not see a relationship between the two.

a. Yes 11111111; “Indeed! I actually worked on the ideas for my poems whenever I felt a bit overwhelmed by the amount of anatomy material. It provided me with a nice break to change the pace up from the science terminology of anatomy to the creativity of poetry”; “I think it was more a way for me to take the class and not go crazy. You have to memorize all this stuff and all these minutia and it’s good for me to notice, every once in awhile, while dissecting the hand, wow there is something beautiful about this part of the hand even though it’s pretty brutal... I think it [the project] kept my interest, so like I said, not getting burned-out... I remember one example was I was learning the skull... and we just spent three hours sitting, just going through [textbook], identifying each hole, and my group members were like, I can’t take this, believe me. So I was sitting there by myself, still trying to identify those holes and I had, someone just passed me the sphenoid bone and I looked at it and it’s so pretty. I was like I’m just gonna draw this right now. So I sat down instead of continuing, I just drew it. After I was finished drawing it, I went back and I was able to go through the rest of you know [the textbook’s] fifteen pages on the holes on the skulls.”; “It didn’t because I didn’t have much anatomy-related stress... It relieved school stress in general though.”; “I guess it’s more of a fun way to approach anatomy, and to some extent, it reduced a little bit of stress...”; “I think it decreased it, you know, because it helped me work through my feelings a little bit in the beginning.”; “It was a good stress reliever.”; “It’s back to the original situation why I did the project, just for the extra credit.”; “It was still a calming

thing even though it wasn't for me like an explosion of [tension release]... I know that a lot of my peers from the class felt that..."; "The project kind of let me express what I was feeling more than I have before."

b. No 111; "No, the project didn't reduce any stress for me b/c it didn't detract from imminent exams"; "I kind of put stress and creativity into two different boxes. They don't really affect each other."; "Doing it brought me a sense of relief in terms of having an outlet, but it didn't stop me from all those crazy hours in the lab or looking at my books."

6. Did project change attitude toward medical profession?

The majority of students felt completing the projects changed or reinforced their attitude toward medicine in a positive way. They variously cited as effects coming to love and appreciate medicine more; learning the importance of not getting trapped in tasks and routines, but always keeping the focus on the patients; understanding better what the profession of medicine meant to their classmates. Several students mentioned that being given the opportunity to do the project signaled to them that the profession values humanism and is concerned for the feelings of its trainees.

a. Yes 11111111; "I came to love medicine even more..."; "It didn't change my attitude. It reinforced...um... it saved me from some of the negative thoughts I had... being in a group of highly motivated and highly intelligent people... the competition is much greater, and, and I think I just got a lot of negative feelings from that."; "To write from the cadaver's point of view can be extended to the patient's point of view that there is all these things that we take for granted as doctors with patients and students take for granted with the cadavers... people get into a routine of doing their jobs or doing a task, and for patients, you really have to keep in mind what is going on with them in general."; "Well actually, a lot of the projects that were displayed, not necessarily from my project, but from other people's projects. I thought it was interesting to see what other people got out of the class and what other people think of medicine. So, in that way, it's sort of helped me to learn about the medical profession in terms of like my colleagues."; "I think so... fifty years ago, you know, this kind of project would never have been proposed to us. They'd say here's the body, go dissect it, and not even try to deal with the human side of medicine like this. I think just the fact that we're, you know, presented with this project, it showed that the field of medicine is changing."; "I think if the project wasn't there, I would be more inclined to think that the profession was more brutal and not very humanistic at all. So then I was appreciative of the fact that my professor actually included the project because it also showed that they support and are aware to a certain extent."; "I think it has changed my attitude in the sense that people out there were interested in this kind of thing, you know what I mean. I think it's good that they're kind of looking into what the students are like in the work area, how it makes them feel and stuff."; "It's just, just made me realize that, umm, that you can't just go through, um, through medicine just like treating your patients as objects, but that if you like take the time, you can see that there is a lot behind that."

b. No 1111

7. Did project change/reinforce attitude toward anatomy?

Students also reported the project changing their attitudes toward anatomy, although majority indicated the project had no effect. One person who expressed a positive valuation noted that the project helped instill an attitude of wonder and respect for the cadavers. Another student commented that doing the project gave her a boost during dissection by making her more interested in body parts that she could incorporate into the project. Several students mentioned that the project helped them shift their perspective toward the class. For example, one student commented that s/he had entered the class with a gung-ho attitude, determined to master every technical detail of anatomy. Doing the projects helped change this perspective to one that emphasized the beauty of the human body and the larger picture of the purpose of anatomy [to help patients). Others commented that they learned to think about the perspective of the cadaver, or to see anatomy not just as a science class but as an important part of their life-experience.

a. Yes 11111; “After writing my pre-anatomy poem, I realized that the cadavers require the same respect that human patients do. I maintained this sense of wonder and respect and this is reflected in my second poem in that it shows how absolutely thankful I am to them”; “I think I came into anatomy thinking that, you know, I’m gonna be really gung-ho about learning about the way everything works. It’s true, but you kind of get burned-out on that because there was so much of it. And so, it’s funny because I came out looking for the beauty and stuff. You came in one way, you came out the other way. And what sticks with you is something different [than what you expected]... you came out looking at it as a whole... “Yeah, it did [reduce stress]. It was a positive spin to the class when you’re feeling overwhelmed. It’s a study break, and it’s a chance to look at it in a different way instead of the grueling stuff I have to learn... The project really gave me something else to be looking at while I was dissecting... so just having that little ‘ump’ I’m on the search for cool things in the body... helped my anatomy experiences a lot... I’m hoping that I’m gonna keep this curiosity and just...um... and looking for the spectacular...um...special things in medicine other than just focusing uh... here’s what you do.”; “What I thought about anatomy was way different from studying anatomy.”; “Probably I wouldn’t have thought of the cadaver’s perspective in general. I might sort of thought of it transiently, pushed it out of the way, and kept doing what I’m doing.”; “I think it [project] added another dimension to the class... I guess it made me like it more, in a different way.... Like it just takes it from being, you know, a science class and it makes it into more a part of your life as a student, a part of your experiences as a medical student.”

b. No 111111; “Uhm, for closure, I didn’t feel, I didn’t feel closure from doing it [project]. I only felt part closure and probably because of the poems I picked. But it wasn’t really an end-all because for me I feel like I need to take time out after everything to reflect upon it.”

Stress Questions

Most of the project completers thought anatomy was either stressful or very stressful, while only a handful rated it as moderately or not very stressful. The primary sources of stress appeared to be the enormous amount of material to be learned and memorized. Several students also noted lab-related stress, describing it as gross, disgusting, and generally uncomfortable. One student was so revolted by lab that s/he developed an eating disorder and became seriously ill. One student disliked lab because s/he felt dependent on peers to help him/her learn the material. Some attributed the stress to self-imposed expectations for excellence; one student blamed his/her peers for creating a culture of constant studying, which contributed to the perceived stress of the course. A few students seemed to thrive on the stressful nature of anatomy. One student thought it was so stressful because it dealt with a “person” rather than simply textbook learning. Even among the three students who said the course was only moderately or not very stressful, two clarified that it was so stressful, they became “desensitized,” or just shut down their emotions, which had the effect of reducing the course-related stress. One student noted that, so long as you kept abreast of the material, it wasn’t too stressful; while another commented simply that the course was not stressful, but informative and interesting.

Fewer non-completing students than completing students rated anatomy as stressful or very stressful. Like the completers, they found the vast amount of material to be mastered to be the primary source of stress. They were more likely to take personal responsibility for their stress level, by explaining that it wouldn’t have been so stress if they’d put more time into studying. One student noted that s/he had difficulty with three-dimensional visualization, which made anatomy challenging. Another didn’t feel competent doing the pre-sections and dissections. The majority described anatomy as either only moderately stressful or not very stressful. These students thought the course was difficult but well-organized and presented, and they either enjoyed it or felt challenged by it. One student reported that the main stress of the course was his/her fear that s/he was losing his humanity.

Most students thought preparing for exams was more stressful than actually taking the exams. Studying was stressful because they couldn’t master all the material. During exams, they tended to have a more fatalistic attitude; and one student commented on the “adrenaline rush” produced by exams, which made him/her feel exams were “fun.” The majority of students thought the practical exam was more stressful than the written, mostly because of the time constraint. A couple of people were also uncomfortable with the actual moving of station to station.

Like the completers, most noncompleters reported that studying for exams was more stressful than taking exams. Like their artistic counterparts, they noted the vast quantity of material to be mastered as the primary source of the stress. Also like their counterparts, they expressed a fatalistic attitude toward the exam itself, and also reiterated the philosophy of “you either know it or you don’t.” One student in this group, like one student in the artistic group, reported being excited on the day of the exam. An approximately equal number of noncompleters as completers (about half of the students) expressed the opinion that the practical was harder than

the written exam, and for similar reasons. The others thought the reverse, or that there was no difference in the stress level produced by the two exams. Those who described the practical as less stressful also called it fun.

The majority of students thought anatomy was the most stressful course, while the remaining students thought some courses were harder and some easier. Students who experienced anatomy to be stressful tended to report a learning style that stressed conceptualization and application of general principles to specific situations; while students who found anatomy less stressful noted that they were facile with memorization and less comfortable with abstract knowledge.

Most non-completer students felt that anatomy was more stressful than some courses, but less stressful than others. Students tended to rate physiology, immunology, neurosciences, biochemistry, molecular cell biology as more stressful; and histology and neurosciences as less stressful. A minority thought other classes were less stressful, while only two students thought other classes were more stressful.

Approximately equal numbers of completer students described their overall medical school experience as not very stressful, moderately stressful, or quite stressful. Students who thought medical school was not very stressful tended to describe themselves as people who adjusted easily; or who kept up with the workload. Students who found the experience to be moderately stressful made statements to the effect that although it was hard, it was less hard than they expected. Those students who reported medical school to be very stressful commented on the workload and the change of lifestyle required.

Most noncompleting students found medical school either not very stressful, or somewhat stressful. Students who reported little or no stress uniformly felt medical school was much less demanding than they had expected. They adapted readily to its pressures and described themselves as good test-takers. Students who experienced moderate stress sometimes felt medical school exceeded their anticipation of the workload, although others reported finding the stress less than they had expected. It appeared that the most stressful aspect for them was the constant pressure to study. Only two non-completer students described medical school as stressful or very stressful, and both attributed the high stress to a feeling of being at sea, not knowing what was expected of them.

When asked specifically about adjusting to new classmates and a new environment, the majority of completing students described this as not at all or only slightly stressful. These students liked their classmates, describing them as “awesome” and “great.” They also tended to describe themselves as able to adjust easily to new situations. Those for whom this adjust was either moderately or very stressful, on the other hand, felt they didn’t fit and reported struggling with becoming comfortable with new people and new places. One student observed that there was a

group dynamic in the class that made people very competitive, and having different values, which made his/her adjustment more stressful.

Most thought the adjustment to new classmates and environment was not at all stressful. These students liked their classmates, enjoyed their company, perceived them as friendly, relaxed, amazing. Students whose adjustment was moderately stressful focused on the initial stress upon arriving at med school and meeting strangers. However, their stress passed quickly. One of the students who described their adjustment as stressful disliked the city in which the medical school was located. The other had great difficulty adapting to what s/he perceived as the highly competitive atmosphere created by other students and their perceived emphasis on constant studying.

1. How stressful was anatomy?

a. Stressful/Very stressful (4-5) 111111111: "I felt I was always studying for anatomy . I enjoyed the material, but it was a constant stressor b/c of the amount of work it took to excel in the course"; "There's so much material and you can't learn it all. At the same time, there's something enjoyable about studying for it, when you're" in lab especially because I... time flies when you're in lab."; "Well, compared to all the other classes, it was a 5 because I put a lot of stress into myself. Everyone else seemed to know about anatomy before they started medical school... Also, there's the lab component to it, so a lot of, you can put a lot of time in there. You know a lot of people spent a lot of time in there... I would say the whole situation was stressful for me."; "Academically, I think anatomy was a 5... a wonderful 5... it's a good learning experience... it was fun; it was hard."; "It was pretty challenging... just the volume of the material and the amount that you have to know. It's pretty amazing. [It was] definitely more stressful than other classes, you know, because you're actually dealing with a, a human."; "Just being in anatomy lab was really hard... not the emotional part. It's just the smell of the anatomy lab, it was just gross. So, it was really disgusting and, uhh, that was hard. .. There was so much memorization, to memorize every little thing, and anatomy was really challenging."; "I had huge problems in the beginning... to the point where I seriously didn't eat... I got really sick... I really put more effort into that class more than anything else."; "Because you have to actually go into the lab sometimes to study. It's not like you can put it off say till the last minute... because you have to physically be there. You have to rely on your classmates to teach it to you, like you can't do it by yourself. Um, and it's just, it's not like comfortable either... it smells, like, you know, you're dirty... it's a lot, physically, a lot more difficult... Honestly, I think because people put like so much external stress into anatomy, like everyone is like oh my god, anatomy is so hard or oh my god, I can't believe anatomy, like I think other, like people talked ... so much that it becomes this like oh my god, I can never do it. That type of thing."; "Just because it's an overwhelming amount of knowledge that like, actually, it wasn't an

overwhelming; it was a large amount of knowledge that I had never ever been exposed to before.”

b. Moderately stressful (3) 1; “Anatomy has been one of our more involved classes but I learned that as long as you keep up with the material daily, you’ll do great”; “the amount of stress was so overwhelming that I just sort of became desensitized... toward the end, I was feeling kind of nostalgic... just for being in there with the bodies, and being with my classmates because I think my classmates are so wonderful for being interested, and making me go into lab when I was too lazy, and making it a good experience.”;

c. Not very stressful (1-2) 11; “I think that I, I just have a natural defense or a natural way to shut emotions out for a short time and focus on things... I find that I’m able to withdraw myself emotionally...um...by, I think I focus on what my peers were doing or the tasks at hand... I like to observe... and become an observer rather than a participant, then that’s how I cope.”; “I didn’t think the class was stressful as much as it felt like some students were being pretty competitive about the class. I thought [the class] was interesting and well-taught.”

d. Exams

1. preparation > taking 11111; “preparation for the exams was very stressful b/c there was always so much material on each”; “very stressful [studying for exams]”; “Oh, taking the exam was actually fun. There was an adrenaline rush when you’re identifying things...studying for it was so monotonous so that’s stressful.”; “Well, preparing was definitely more challenging because it’s a lot of hours that you have to put in, you know, both with the books and the lab. Taking the test, you just go in, and if you know the answer, you know it. If you don’t, you don’t, and you leave it like that.”; “The exam is stressful to a certain extent because there was so much that you have to know. But come the day of, it’s not so bad...”

2. preparation < taking 11; “I guess that the exam was more stressful than taking the exam”; “Preparing for the exam was kind of fun because you’re going with your friends and everyone was quizzing each other.”

3. preparation = taking 1; “It wasn’t impossible, umm, but it was very challenging.”

4. practical > written 1111; “the written was fine. I felt that the practical was a bit stressful only because you must teach yourself not to reflect back on previous questions but stay focused on the question at hand”; practical was “more time restricted.”; “I think the practical is more stressful just because it’s time-pressured and you’re moving around... I was more nervous about doing that...”; “... the time for the practical was kind of stressful because you have to like recall; whereas, some of the other tests were multiple choice where you can eliminate, and this [practical] was just all from memory.

5. written > practical 11; “I thought the written one was harder because it seemed the written one, the questions were a lot trickier, you know... The lab, it’s like, it’s pretty clear whether you knew it or not, you know... I never thought the time was a problem on those.”; “Well, the written was harder, like the questions were a lot harder, and confusing. Sometimes I thought they were kind of tricky, but they weren’t tricky if you knew it really well, but if you didn’t, it’s tricky. Umm, and the practical, like you have so little time at each station... whereas the written... so you’re more like oh, I’ll take my time or something.”

2. Other courses

a. Some more stressful than anatomy, some less stressful 1111 (micro 11, physio 1 more stressful); (physio 1, histo 11, biochem 11, immuno 1, neuro 1, less stressful); “other courses were stressful in different ways. You could study, but you couldn’t... you didn’t know what you’re gonna be faced with.”

b. Less stressful than anatomy 111111; “other courses did not require as much constant studying as anatomy so were not as stressful”;

c. More stressful than anatomy 1: “I think they were more stressful because those were the subjects I didn’t like to study.”

3. Learning style

a. Hates memorization/likes abstract 111; “I think anatomy in itself can create a lot of stress because it’s a lot of memorization and I really like, I’m really opposed to that mode of learning...”; “it was just the way that it was that I had to learn that I had never learned that way before... and memorize every... as they said, just learn every orientation of every part of the body.”; [Anatomy was harder than other classes] “probably because it was pure memorization; whereas others, like physiology and others were conceptual, and if you understood the big picture, and you kind of, you can apply your knowledge...”

b. Likes memorization/uncomfortable with abstract

4. Medical school overall

a. Not very stressful 1111: “I didn’t have much trouble adjusting to medical school as far as academics went”; “If you take it one test and class at a time, but still enjoy life, medical school is not stressful but actually very do-able”

b. Moderately stressful 11111: “I was working as hard as I worked in college. I thought it was gonna be a lot harder than that.”; “I think it’s in the middle. I think it definitely had its ups and downs. Sometimes, it’s very stressful, and sometimes, it’s very relaxed.”; “I’ll say it’s less so than college was for me because, um, the workload of medical school has been less, and um, you know, I was surprised actually. Things, things definitely are not easy, but they’re not as hard as I thought it would be.”; College was pretty easy, and coming into med school was a shock, and just getting used to that, like that transition was the hardest part.... I think it’s the amount of knowledge... I was just not used to studying like I needed to.”

c. Very stressful 111: “It’s the most stressful thing I’ve ever had...”; “It’s a fulltime job, and then some. And you’ve completely changed your lifestyle, it’s a

lifestyle change. So it's, it's very stressful... but you get used to it... What was really hard for me was coming, transitioning from doing absolutely nothing to this workload.”;

5. Adjusting new class/mates environment

a. Not stressful at all/little stressful 1111111: “Not stressful at all, my classmates are awesome people”; “As everyone kind of gets to know each other pretty fast, you just, I don't know, it feels comfortable.”; “I generally get comfortable in a place where I am.. I got, you know, I got my bearings here...”; “Getting to know my classmates was easy.”; “Zero [stress]I think the environment was pretty comfortable. The teachers are approachable. The students were great... I think they did a great job in picking the students and, um, I think everyone in my class is very relaxed.”

b. Very stressful 11: “It's really stressful. You just lost all your friends and a new place. And I don't quite fit anymore.”; “It's hard to get a different group of people together. We all have different backgrounds. Everyone is great. It's a fun environment, but um... there's also a lot of different... some people come right out of college, some people have been out of college for 20 years, and there are a lot of different perspectives and ideas about why they were there, and what they think important to study, and what they think important about medicine. Sometimes, you don't always agree what's important. Some people are out to...um... out for very competitive specialties, and sometimes, it doesn't make them bad people, but sometimes it made them act in some ways to cause resentment or distrust... I think it's counter-productive to relationship and professionalism.”;

c. Moderately stressful 11: “It took me a long time actually, but right now, I would say I'm pretty happy, but it took me a long time to get to this point.”; “I don't adjust well to like new environments, like moving from, like I moved to a whole new city... You're with the same people all the time. And so, with these 91 people, it's easy to find 10 people that you really like, or 10 people that you can hang out with all the time.”

General comments:

Students completing creative projects appreciated the opportunity to “integrate” their scientific and artistic sides. It provided an outlet for difficult emotions, encouraged reflection, offered a way to acknowledge the feeling aspect of medicine, an experience of shifting perspectives, and a method of closure. Perhaps most importantly, it sent a message to students that the profession itself valued the humanistic dimension of medicine.

About project:

“I enjoyed the opportunity to use my creative energies to synthesize my academic and spiritual sides.”

“It's good to integrate the two worlds. It was just like the value of combining information and the more fuzzy stuff like expression, people, feelings, things like that.”

“[The project] was a nice part of my anatomy experience”

“That’s the reason I love that we’re doing this because I knew it’s something I had a deadline, and I had a goal to do it”

“I hope that the creative system is continued... I think if you get more people to participate in any way... that’s good.”

“I think it’s hard to do the anatomy class without choking to some extent... That’s [the creative project] a good way of dealing with being in anatomy...”

“It [creative project] was a nice way to wrap it [course] up.”

“I think the creative project is a good idea... I think it just changed my perspective a little bit than what I would have thought about anatomy otherwise”

“It was nice to remind myself that I can do other things with my time off... I think it’s great. I think that they should, I mean, in terms of doing it or not doing it, keep offering it as an option.”

“For the project, I think it’s a good idea. I think it does help you work through some feelings in the beginning of the class, and I think a lot of people had a harder time of adjusting to it than I did, and so I think for those people, it would be even more helpful.”

“Keep it around because it’s good for, it’s good for, something different than we do every day.”

“I thought it was a really good thing, not just the creative project, but all the time that we went around, like thinking about it, you know.”

“I think it’s [project] a great idea. “ [recommends a discussion group forum for sharing projects to help understand them better because...] I think the creative project has so much to do with like yourself... just because someone saw a picture that I drew that means nothing to someone else, but it probably meant something to the person that drew it.”

“I think the majority of the people in our class really, and me included, appreciated it that we had things like the creative projects.. if people know that people out there are supportive, understand that... it’s okay that these things bother you; like that people are willing to listen to you, like I think that makes people like feel totally different about the environment....I think a lot of people, it’s not their thing, like, like I was on the verge of not doing it, right? Because I’m not really a creative, artistic person, but just knowing that you can write it, and someone is going to read it. Someone cares, like I think that does make a difference.”

About anatomy:

“I got Honors in the course, and it was my favorite course in first year, but I think we should have had a shorter course”

“They had given their body exactly to do this. They willed themselves for this purpose, but without wondering if they actually knew the brutality of what dissection really is, you know. To wonder about that, to feel like a murderer, you know. It’s like you’re cutting and poking things where nobody else has been.”

“Our ceremony, I think, really helped me close everything up. But if we didn’t have that, I’d probably still be thinking about it. And it probably would’ve just gnawed at me.”

**“I really had to know my anatomy and that to make the most out of the gift that I had been given I had to learn it the best that I could. I was really pushing myself to do it because like that’s how I felt I could be at peace with dissecting the cadaver.”
“I came to love it, and I think it’s probably the most useful class.”**

About interview:

“Thank you for this opportunity”

NONCOMPLETERS 1111111111

1. Why didn’t participate?

The majority of non-completers said they didn’t participate because they were not “creative.” Several of the non-completers mentioned that they had seriously considered, or even attempted, the project. Almost as many students decided not to do the project because of lack of sufficient time and because they perceived the project as simply extra work. . Quite a few students stated that the extra credit was not an incentive. One student wanted to prove to him/herself that s/he could honor without extra credit. Some appeared to be held back because they were afraid that they couldn’t produce a quality project. Several said that they had no emotional need to do the project, and two other students noted that they couldn’t see any value in it. A couple of students confessed that they refrained from participating because the project seemed too personal and self-revealing.

Because half of the students indicated they considered doing a project, we asked them what they would have done. One mentioned writing a song; a couple thought they would have done something using photography; a couple mentioned poetry, and another mentioned writing in general. One student stated that, rather than doing a tangible project, s/he would just have “reflected internally.” What was interesting about these hypothetical projects was the detail with which some of the students reported them. It was obvious that these students had thought carefully and creatively about how to express their feelings about anatomy, although they had not actually completed a project. One student even indicated that s/he intended to do the project for his/her own satisfaction, although the course had already concluded. Three other students thought they would have done a project, and would probably have found it a useful way to process their feelings. However, over half the students stated that they would probably make the same choice not to complete the project. These students said that they “hated” doing arts-related projects, didn’t have the motivation, and wouldn’t have felt comfortable attempting a creative project.

Eleven of the twelve students had viewed creative projects done by their peers. The large majority of these students described these projects as “awesome,” “impressive,” “amazing,” “very creative,” “beautiful.” They were astonished and impressed by the creative talents their classmates exhibited. One student found that seeing them was therapeutic because they helped him/her identify and process his/her own feelings, as well as made them feel less alone in their reactions. A couple

of students said that after seeing the projects, they felt closer and more emotionally connected to their classmates because they discovered dimensions of compassion and creativity in them. Three of the students also agreed that seeing the projects helped them reflect on their own anatomy experience. One stated that the projects helped put into language and form his/her own inchoate feelings, which thus became clearer and more accessible. Another described his/her way of thinking about anatomy as “scientific and cold.” Seeing the projects of classmates helped this student appreciate aesthetic and emotional aspects of anatomy.

The remaining students were less enthusiastic. These said projects were “good,” but also said they couldn’t always understand them. One student described most of the projects as “simple,” and defensively stated that he could have done the equivalent if he had been “inspired.” One student questioned the “sincerity” of his classmates who did the projects, and asserted that very few if any students would have turned in projects without the extra credit. Several students denied that seeing their classmates’ projects helped them to reflect on anatomy in any way; rather, their views of anatomy were influenced by informal discussions with classmates.

a. Not creative 1111111; “I’m not really a poet or writer or anything”; “I just don’t think I’m creative...I’m not really an artsy person”; “I don’t really express myself in that way”; “I’m not really a humanities guy... I’m not really an artistic person”; “I wanted to participate, and I was trying to think of things that I could do, but I just, I’m not a very good writer. I don’t like writing, and I like photography. So I was going to do something with photography... I couldn’t think of something I really wanted to do...”; “I’m not artistically creative; like I’m not creative, at least I don’t think. I tried. I started writing a poem... and just nothing comes out... Like you know, the only reason that I didn’t do it is because I don’t feel like I have the artistic capabilities.”; “I’m not creative. I don’t like art... I kind of enjoy writing, but I just didn’t feel like doing it.”; “I’m just not artistic, creative.”

b. Didn’t want to do more work 11; “Plus, it seemed like a bunch of work that would be tedious”

c. Not enough time 11111; “I was doing so many other things, that got pushed back. ..I just didn’t get around to actually doing it because I was doing other things and it kind of got lost in the shuffle.”; “It wasn’t worth enough for me because my exam scores were where I wanted them to bet at; so there wasn’t quite the incentive that I needed”; “like it would take me too long to be creative...”; “I didn’t really have extra time”

d. extra credit not an incentive 11111: “If I were doing it just for the extra point, then I feel like I can just study it a little harder instead of taking the time doing the creative projects and get those extra points that way.”; “[the extra credit] really didn’t entice me”; “I wanted to honor the class without um the extra bonus. I just wanted to study on my own.”

e. Too self-revealing 11; “I don’t want other people to know how I feel... so I didn’t do it”; “But I did write out something. I kept a journal... So I had a few things that I wrote down... I just didn’t really like turning [it] in... because it was much more personal to me.”

f. Didn’t have an emotional need 111: “With the anatomy lab, I just thought of the body as a body; I think it’s an absence of a soul... but the body itself has like no meaning to me... I just thought of it as a body for me to understand, so like in the future, I can learn from this apply it to people that actually have a spirit or a soul. So I just thought of it as functional.”; “I didn’t really have anything that I really wanted to express... like I didn’t really have that much emotion in terms of anatomy. I know a lot of my classmates were, were uh, more emotional about things.”;

g. Didn’t see any value in it 11: “I didn’t really see any real benefit to doing it.”; “It’s just not something I wanted to do.”

h. Not good enough 111: “I didn’t want to turn in something that didn’t have my full attention or wasn’t my best, you know, really my best...”; “I didn’t know if it would be good enough.”; “I never like doing creative projects. It’s just that I’m awful at it”

2. What would have done?

a. something musical 1; about cadavers’ past lives and what they’ve given “...Probably of what the people, like what they did before they wee cadavers, like their lives, and how they’re enriching our lives. So, like talking about the different people they were, even though we don’t know who they were at all, but you know, it’s kind of bringing that, and like they’re actual people now even more now in the very end of their lives, now that their lives have passed...”

b. Just reflects internally 1: “... that’s my greater vision for med school – a bunch of selfless people that have these great gifts that are trying to make the world a better place, and like I saw these people as like starting this tradition of selflessness, and like in, as you know, selflessness is usually contagious. So I was hoping that like that whole process would like pass on to us, and we would go on to be selfless people.... So I feel that like the fact that they gave their bodies up, it made me think about things like this, you know?, but like it wasn’t... we write a poem or like... draw something.”

c. Would have written a poem 11; “[I’d] like put my feelings down about the anatomy experiences” [“What were your feelings and experiences that you wanted to put into your poem?” – “I have the utmost respect for the human body, um, so being in the anatomy lab made me uncomfortable... so a lot of time when I’m in there with a bunch of different people, it’s hard for me sometimes, not because they did something that is inappropriate, but for me, it was difficult for me to see that it’s being done on someone... I just want to put those feelings down.”

d. Photograph 11; “Um I thought of doing something... which was just to take, just taking pictures of things in nature that mimic things in anatomy, or not necessarily things in nature, but things in general life because you start to see the

world a little bit differently after you're seeing the shapes and structures on the cadavers... I kind of still think about doing them, even though anatomy is over."

e. Something written 1

3. Reaction to other people's projects

a. Impressive, awesome, amazing, very creative, beautiful 11111111: "I was impressed by how much creativity was in the projects and how people could think of different things to do like that."; "How did it make me feel? Kind of like I, not that I wished I had done one, but that I had a creative bone in my body to be able to have done something like that."; "From the anatomical perspective, some of the drawings were very accurate, very amazing... but most of it are the artistic perspectives, they are very...ah... very aesthetically pleasing."; "I was pretty impressed with the skills and talents that we had in our class, just pretty amazed at what people can do"; "I thought they were amazing... I thought they were beautiful... they were amazing and wonderful... and so touching... I love art, but I couldn't create it"; "I really liked them all. I love arts. I think it's a great way to express a lot of the emotions and feelings. So I was impressed by all of them, even though, some were obviously artistic and great... but, um, even those that weren't as artistic to begin with, it was still creative art, I thought. Good expressions."

b. Good 1: "I think it's good to express, um, to express whatever you're feeling, in art... some of them are pretty.. pretty good."

c. Simple 1: "it's pretty simple too like the way, the things they did, so I probably could have done it if I were really inspired to. I guess I just wasn't inspired at the time."

d. Couldn't understand them 1: "It was just like there was a picture and someone put like a bunch of words... like I don't know, art is very personal, and a lot of meanings are like hidden... I didn't know like why they did that or their motivations..."

e. Some good, some difficult to understand 1: "Some of them I thought were like really insightful... others were kind of like, I don't know, I would say like modern art pieces kind of thing, um, which kind of like portray like something, but I didn't connect with it..."

f. Therapeutic 1; "Some of the things in the anatomy course that I had difficult with dealt with my emotions and stuff in there. So reading about some other people's experiences were really like helpful and reminded me, hey, someone else is going through this or this is how they feel about it, or just getting all those different perspectives, you know, helps... for me, it's good to know that other people out there were feeling the same way that I did. This is how they feel about it. Just getting all those views was helpful."

g. Helped make stronger connection with other students

1. Yes 11; "It brought me closer to their experiences, um so I guess in a way, it brought me closer to them" ; [It made me feel that the artist was]... just compassionate to see things from the cadaver's perspective."; "Seeing their artworks was definitely a form of bonding, more of a connection with them."

2. No 1

h. Helped you reflect on anatomy?

1. Yes 111; “I think [the creative projects] more made me... I think all the things that I saw I kind of agreed with. So they presented a feeling that I had felt about anatomy, not that they presented something new necessarily, but just something I’d already felt, but they expressed it in this way that was artistic, a creative way... [the creative projects showed] that more, things can be beautiful just because you look at them and they are artistically, they were pleasing to your eyes, but when you understand, like the behind, the meaning behind it, the reason for the art, I just think that makes it one hundred times better....”; “I think it was very interesting to see how people saw anatomy differently... and I didn’t even see it like that. I didn’t even see... in artistic ways. I see in this cold, scientific [way].”; “It just made me feel sad for the cadavers and that we didn’t know who they were as people.”

2. No 111: “I think the perspective came from like the other people, like their opinions and voices, not so much from the project... When [they] were speaking, I got a better sense of like how anatomy affected them, and something I didn’t realize was like how big of a deal it was because for me, it wasn’t a big deal at all.”; “I guess I was more in awe of their artistic abilities than applying it to anatomy”

i. Questioned sincerity 1: “I felt like I didn’t know how sincere people were in doing them. I thought most of them did it for the extra credit... I saw people like doing it right before class trying to get some extra credit... Like I had a feeling like if there was no credit given like very very few people would do it because I don’t think people get inspired, especially in our science specialty.”

4. Make same choice

a. Yes 111111; “I just don’t see the, you know, driving force for me to do it”; “I think I’m more shy when it comes to like art stuff. Besides, I don’t like to do it often. I think it takes a lot to get it out of me... I don’t feel good about doing those kinds of stuff I guess.”; “I hate drawings and things like that”

b. Would do project 11; “would have been cool and interesting to do”; “I actually might [still] do the anatomy project... it was more about me, um, getting my feelings out about it. That’s why I liked we had small discussion groups about anatomy. I participated in those because I wanted to talk to people about what I felt in there... so the anatomy project would be an extension to that for me.”

c. Might do project 11 “I kind of wish I would have done the project a little bit”

Stress Questions

1. How stressful was anatomy?

a. Stressful to very stressful 11111: “...because I didn’t give myself enough time”; “I’d say I put the most time into it, so that made it stressful, like I always felt like I had to study for anatomy”; “In the beginning, it was really really stressful... I just wasn’t prepared.”; “The materials are clear. There is no question about the material. Um, what’s stressful is the amount of material. There is so much of it for a short amount of time. ...You know

exactly what is gonna be tested, and it's very straightforward. It's just the load and the amount of time... I didn't feel competent enough to go in, like pre-dissection and dissection, I didn't know if I knew my material well enough... that struggle like "oh my god, I can't find it now, like I'm never gonna find it"; "I guess I was just lazy, and it's not the class you can be lazy in. You have to have multiple books open at the same time... lots of memorization... and I'm not a visual person so the three-dimensional aspect was really hard for me.. I didn't enjoy being in the lab... it's not [an] emotional [thing]. It stinks. It's cold. I don't know. It just doesn't, I don't enjoy cutting."

b. Not very stressful 111; "Most classes in medical school not really, I don't let it get to me, you know. Anatomy I thought was just fun"

c. Moderately stressful 1111; "I came from working, and coming back to school... so for me, school is a break... I mean it's a difficult course and there is a lot to learn, but I had had some experiences with like anatomy before. So it wasn't, for me, the most stressful time, the academic part was not stressful. The stressful part was like being able to dissect on someone because for me, like I don't know, I felt really uncomfortable once I walked up and saw what was done... it's weird because once I got into there, I was able to do it like I focused into it, and I felt, for me, the stressful part was like I felt like I was losing part of my humanity, you know."; "It wasn't really that much pressure because it was spaced out"; "For anatomy, I really, I loved it. I kept up with it. I studied a lot and I worked really hard, but I wasn't stressed about it; I really liked doing it. I really liked studying for it."; "They did a good job of easing us into it, and addressing all different sides of the experience, acknowledging that it was an emotional experience, that this is not what normal people do in a normal everyday life. Um, but they were also very pragmatic about it, and just, here's your cadaver. This is what you're going to work on... Anatomy was more so [stressful] because of the volume... um, definitely doable."

2. Studying vs. taking exam

a. Studying > taking 11111; [Interviewer]: "Is it the anticipation, the fear of not knowing?" "Yes, yes."; "You never get the feeling you know enough because it's always... there's so much stuff to know in anatomy... whereas the exam itself was tough, but you kind of resign yourself to that, I personally kind of resigned myself to what I know, I know, and what I don't know, it's what's gonna be on that exam..."; "I guess studying for it was pretty stressful because there was so much material and I felt like there was no way I'm gonna know all of it, so I was really nervous going into the exam..."; "You don't know what is going on, and clearly, you cannot test everything that is in the book, yet you have to know it all for it [the exam]."; "It's stressful because you realized at the end that there's so much material that you didn't quite get to as much as you wanted to. Um, so that was very stressful... Exam day, I'm not stressed out. I actually got excited. I was not stressed out in the exam."

b. Studying = taking 11; "not stressful, you know... overall it's not a stressful

experience. For me, it's like a task that has to be completed. I try to focus on what I had to do, and once I got out, I kind of forget about it."

c. Taking exam > studying 1

3. Practical vs. written

a. Practical > written 11111; "I felt that the practical was much more stressful than the written because with the written, you're prompted with answers, so I thought the physical was very stressful"; "I mean the practical was a little bit nerve-racking because it was different"; "Um the written part was never hard for me. It was really easy like, um, I'm the person that can memorize it easily...[in the practical] you have to move. So it's kind of stressful...like I was always nervous about it. It was like that competency thing again."; more stressful because of the time limit. The problem that I have with the practical is they force you to know everything in terms of you have to have it memorized. You can't really think or rule out things..."

b. Practical < written 111; "the practical part I was, thought it was a lot of fun actually... that's where I really felt like I'm in medical school. All the other exams are just like taking it..."; "The practical part was for me okay... it was fine."; "I found that the practical part to be kind of fun because it was more a kind of game than a test. I thought it was a lot easier than the written... [the written] it's a lot more deep. I'm more of a visual, I'm a visual guy."

c. Practical = written 11; "It's just the practical, just the time issue."; "I really liked the practical. The way the written test was written was fun. It's more like a game, so stress was not so high at the day of the test... You either walk in, you either know it or you don't know it."

4. Other courses – stress cmp. to anatomy

a. Less stress 1111

b. More stress 11; "I stressed more about other classes because I wasn't prepared for other classes."

c. Some more, some less 111111 (physio 111111, histo 1, immuno 1111, neuro 1111, genetics 1, biochem 1111, molecular cell bio 1111, patho 1, beh sci 1, more stressful) physio 1, biochem 1, cell bio 1, histo 11, beh sci 1, epi 1, neuro 111, genetics 1, dr-pt 1, less stressful); "Ah, neuroscience was really stressful for me just because I, um, the lecture was so vague. The material was so broad that I didn't know where it stopped and where to begin... I like I just sometimes was clueless how to study for the test."; "I'd say they were all less stressful [than anatomy] for me. My background was really good in those. [They] went really fast."

d. The same 1

e. Learning style

1. Likes memorization/regurgitation more 11; "anatomy is such a concrete science, it's very black and white, memorize this, and you can see it, and that... that makes a lot of sense to me rather than all those minutiae and lots of other parts of medical science where... a lot of gray areas are involved. So, the fact that anatomy was so very, you know, black and white made it easy for me to learn, I

would say....there are so many levels [in classes like biochem, molecular cell] that you have to get deep into it before you get full understanding of it”

2. Likes conceptualizing more 1: “like anatomy there was just rote memorization, and there’s like no tactic... you couldn’t get around it, you couldn’t like learn this one application and then apply it to all the new things like some of our other classes, like physio, once you get the idea, you can relate it to other information...”

3. Three dimensional aspect difficult 1: “Like a lot of it was based on the three-dimensional understanding, the three-dimensional relationships...I’m not a visual person so the three-dimensional aspect was really hard for me.”

5. Medical school overall stress

a. Not very stressful 11111; “Definitely not as stressful as I expected it to be... It’s just not that bad”; “So it’s stressful, but probably less than when you’re an undergrad.”; “I would say it is as I expected... I expected it to be a lot of work, and right away, you have to adjust to the fact that you... studying became... it didn’t become strange that you’re studying eight hours on a Saturday rather than watching TV or something else. .. I think I’ve acclimated to that fairly quickly... it never really bothered me, so I didn’t really stress out about that at all...”; “I guess not as stressful as I thought it would be. I get here, it’s like wow, I don’t have to study all the time.”; “I just never have much problem with the exams. So the whole studying thing doesn’t get me as much as a lot of people worried about it.”

b. Moderately stressful 11111; “It was a lot more work than I thought it would be, and I was surprised at how much I had to study compared to undergrad... I think it’s more stressful, but for some strange reason, I’m not as nervous as I used to be. I’m a lot more calm about studying and about school.”; “I think I came in thinking that I was like the bomb. So, it was a reality check, and so in that sense, it was stressful because I had expectations for myself, and I wasn’t meeting them. So, that was causing stress. It was just the fact of having to study constantly, never really having a great was stressful... It was a lot more than I thought it would be.”; “Some aspects are stressful. I think the most stressful part is you never get a break... If you stay up on the work, it’s not that bad. I took a lot of time off between college and medical school... I think just getting back to having to study daily, like I, it was hard for me. I’ve never really studied anything where I had to memorize so much information. Usually, it was just applying information.... I guess stress-wise, it’s not as stressful as I thought it would be, like not as difficult. But I never really imagined like how much it would just take over my life.”

c. Very stressful 11; “Not knowing, um not knowing what you’re supposed to learn exactly. I think med school was like, um, was shoving all this information down your throat. You don’t know what is important and what is not.”;

6. New classmates/environment

a. Stressful to very stressful 11: “That was pretty stressful, just because, mostly because I don’t want to be in [city]. A huge part of me was resistant to liking anything about [city]. I love my classmates though... But in general, I was kind of stressful because I was unhappy.”; “I think the stress is more related in terms of our

class, like people studied way too much, and that sucked... like I don't really have friends around here... everyone is super-stressed out, and that made me stress out and study when I shouldn't be because it's unnecessary... People here study more than I expected... I wish people were more outgoing..."

b. Somewhat stressful 1111: "Oh, it hasn't been so bad... meeting new, like walking in that first day was stressful... and now you're here, and I don't know anybody. That was stressful, that was hard."; "I always think it's stressful to meet new people and like move somewhere where you don't know that many people. But like it wasn't that stressful because I have done it before so many times. So I was kind of used to it."; "Probably the most stressful moment was walking in the first day of class... But everyone was so friendly. The school is very, it's known to be friendly and open and welcoming."

c. Not at all stressful 11111: "I was excited about it, I was ready to go to meet people and start something new."; "I just, I don't feel I have to adjust to my classmates because they're all pretty cool..."; "everyone is really friendly and really nice, and yeah, walking in, I don't really feel stress."; "I really like meeting new people. It was all good... Meeting new people is my favorite thing to do in the world. And everybody in our class was like the greatest thing. It was the reason I'm in med school was to meet all these amazing people and to get to know them and to get to hang out with them."; "I mean all the classmates are great. I like hanging out with them. I don't know. Have a good time. It's been fun... I like all my classmates."

General comments:

About projects:

Liked/learned from projects 11111

Neutral about project 1

"[Seeing] the anatomy projects like helped me get through some of the things I was dealing with and I think it's good like to do the project. I actually like the small group discussion for anatomy more because I am more like a verbal person... I think both of the experiences were really good to help people to get through some of the things they were feeling... I had like, for me, anatomy was emotional – the dissection part. Like, being able to find an outlet for those emotions and feelings. And I think the anatomy project is a great way for doing that."

"I think it's a good project, but it shouldn't be mandatory... it's kind of a deterrent if you don't think you're good enough because people will look at it and they're like, it's not that great."

"[Projects] changed the way I, you know, the way I think about... how talented people can be, just....doing this project"

"I think it's great that a lot of people did the creative project. I think it's a good idea; it's not my bag."

"I think it's [creative project] a good idea for people who want to do it."

“I’m really happy that they gave the creative project option, and encouraged that. I think it’s really important even though I didn’t do it. Um, I still really appreciated it. I loved seeing my classmates’ artworks displayed, and I liked the fact that it made me [think], well, how do I express my anatomy experiences? And I have thought about it, how is anatomy affecting me? How [could] I express it? Just because, in part because they had this option to do the creative project.

About interview: “This was so fun, just let me sit here and talk. I love it, I can do this all day.”

About anatomy: “Seeing hands and faces, it was hard both times because those were very human-like features, and those were still hard...”

“Anatomy changed like the way I, you know... the way I think about the human body and how generous people can be...Anatomy was just amazing, like to learn everything about the whole body, and it’s so cool. It made you feel really like a medical student.”

“Anatomy, I think the stress was lower because I enjoyed the class. I mean it’s still a challenging, tough class, and it wasn’t as if it’s a kickback, but it’s a good challenge. I enjoyed it.”

“I couldn’t imagine, I couldn’t image not taking it because a part of that is the bonding that you’re having with your classmates... Um, it’s kind of a little boot camp... It’s a lot of fun too.”

Humanizing anatomy: “The thing that was the most important was like when we had that last day ceremony, that’s like when I felt people were really sincere...”

Medical school: “The way that this school works is that it tests us on really really minor details that we forget within a week, rather than stressing major concepts.”