Travelers in the Valley of Death:
Medical Students' Experiences in Anatomy Lab

by

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Pamela Jean Petersen-Crair
Chapter I

Introduction

It is commonly known that medical students dissect the bodies of the dead; it is less commonly realized that these same dead do a great deal of cutting, probing, and pulling at the minds of their youthful dissectors. ... ¹

What struck me most about my first day in medical school was that I did not faint; but considering I have never fainted, this should not have come as a surprise. Yet, I had contemplated this moment for years. I was convinced I would faint upon entering the anatomy lab and seeing the cadavers—thereby ending my medical career. Students across the country begin medical school by filing into rooms filled with stainless steel tables, each supporting a body draped with a plastic sheet, hiding the unknown. Is there a woman or a man beneath this plastic sheet? Is his face covered? Are her hands wrapped? How will I react when the plastic sheet is finally removed?

Being in a program of only twelve students, we were fortunate in that our laboratory room had only three of these cadavers, instead of the thirty, forty, or more at most other medical schools. Students spend literally hundreds of hours in these rooms, with their cadavers, working uncomfortably close to their three other lab partners. This is where the medical student is slowly socialized into the medical profession.

In retrospect, I found it strange that my classmates and I never discussed our reactions to the cadaver. Nobody could deny the disturbing sights, the bothersome noises of bone being cut, the unbearable smells, yet these realities

were seldom discussed. This conspiracy of silence was not unusual. Various researchers have documented that medical students have profound reactions to cadaver dissections, but that they do not discuss these reactions and feelings (Smith & Kleinman, 1989; William, 1992). As part of the socialization process, we learn not to share our feelings with our colleagues: "I dreamed about Ingmar many times. He was always very much alive in the dreams. I never told this to my fellow students. We didn't talk about the effect the cadavers had on us; nor did we talk about death" (Sharkey, 1982, p. 16). How ironic that a profession supposedly based on caring communicates this message of indifference to future physicians from the first day of school.

Ask any medical student or physician about the gross anatomy lab, and they will have distinct memories, even years after their initial exposure to it. While the experiences of medical students are rich, the literature documenting them is not. Little research exists that communicates the essence of cadaver dissection through in-depth interviews and analysis. My research goal is to document the experiences of eight medical students in the gross anatomy lab, including their thoughts and feelings about dissection. In doing so, I hope to share with the students as I was unable to do with my own classmates.
Chapter II

Literature Review

A. Introduction

The emotional impact of the dissection experience on medical students has been recognized for at least ninety years, but has been examined closely during only the last thirty. In the twentieth century, one of the earliest mentions of this aspect of the gross anatomy lab appeared in an address by Dr. J. E. King to the incoming freshmen at a New York medical school. He discussed one of the “three occasions in the life of every freshman which I am sure way down deep in his heart he dreads . . . his first visit to the dissecting room” which “at first has for him a certain horrible charm” (1906, p. 184). Seventy-five years later, Knight, reflecting on Dr. King’s quote, stated that “the trauma . . . related to the dissection of the cadaver are expressed by a majority of physicians. Thus, the experience leaves an imprint that may never be completely erased” (1981, p. 58).

Subsequent mention of the emotional impact of cadaver dissection appeared in classic works of the early sixties. For example, two well-known books devoted only a few paragraphs to this aspect of medical education: a book on medical socialization, Boys in White: Student Culture in Medical School (Becker, Geer, Hughes, & Strauss, 1977, c. 1961) and another on the psychological aspects of medicine, The Psychological Basis of Medical Practice (Lief, & Fox, 1963). In contrast, in the seventies, researchers started to examine the anatomy lab as the focus of their research and articles appeared devoted to the topic of cadaver dissection. The eighties brought an explosion of publications about the anatomy lab, including some that recognized the importance of the emotional aspects of cadaver dissection as a way of teaching the humanitarian side of medicine.
More recently, in the nineties, two great works on the anatomy lab appeared: Hafferty's (1991) tome on the emotional socialization of medical students around death and dying, and William's (1992) ethnographic research on the "communication regulations" during the cadaver dissection—specifically, the "conspiracy of silence between professors and students and between students and their fellow students" (p.65).

B. Pre-enlightenment: The Early Works

The classic work of Becker et al. (1977) has been cited often as evidence that cadaver dissection is a non-traumatic event for medical students (Penney, 1983, p. 220; Wear, 1989, p. 379; William, 1992, p. 66), or "does not merit the term of 'trauma,'" (Shalev & Nathan, 1985, p. 122), or can be "negotiated quickly and uneventfully" (Finkelstein & Mathers, 1990, p. 220). Actually, these authors cited one sentence in the work of Becker et al., which referred to a conclusion based on a random sampling of nineteen students, none of whom mentioned the cadaver as traumatic (Becker, Geer, Hughes, & Strauss, 1977, pp. 105-106). However, Becker et al. specifically acknowledged that the cadaver could bother students in ways not observed in their study; indeed, one or two students seemed to be bothered by their cadavers, although they did not mention how. They concluded, "... freshmen have no co-ordinated set of ideas and activities, no continuing perspective on death or the cadaver that cannot be subsumed in their perspective on academic work" (Becker et al., 1977, p. 106).

McGuire, in his critical review of psycho-social studies of medical students, also cited the work of Becker to refute the claim that "... when a medical student is first exposed to a cadaver in gross anatomy, he experiences many internal conflicts dealing with the meaning of death, religious attitudes, and the like" (1977, p. 433). He added, "In spite of careful group observation, frequent
interviews, the analysis of student humor, and even analysis of dream material, they could detect no evidences of trauma associated with the task of having to work on a dead human body" (pp. 433-434).

The "dream material" mentioned by McGuire referred to the examination by Becker and his colleagues of the students' dreams to further study underlying tension in the students. In their field notes, Becker et al. found five dreams—three of which occurred during the night following the first days of dissection, which they said "are undoubtedly trauma dreams. One dream is about a cadaver sitting up in the tank, and another about a body that opens the pet cock of its tank and drains out the phenol" (Becker et al., 1977, p. 105). In spite of these "trauma dreams," Becker and his colleagues still concluded that anatomy is non-traumatic because nobody mentioned the cadaver in their random sample. As a result, many authors have subsequently interpreted the sentence, "None mention the cadaver as traumatic," (Becker et al., 1977, p. 106) as definitive evidence that the cadaver is non-traumatic, even though this statement was based on a limited sample which ignored the suggestive evidence in the dreams. Thus, a close examination of the work of Becker et al. reveals that McGuire and the above authors have misrepresented the study in their continued claim that anatomy is a non-traumatic event, in spite of dreams to the contrary and the acknowledgment by Becker et al. that the cadavers might have bothered the students in ways not observed in their study.

C. Enlightenment: Acknowledgment of Emotions

*Student Reactions*

In contrast to the work of Becker et al., Lief and Fox (1963) reported two years later that students *did* have anxieties concerning cadaver dissection, and that they coped by using suppression and repression. These authors also found that
students controlled their feelings to prove their suitability as a good physician and that "students are reluctant to discuss their feelings about dissection. 'There is something like an unwritten law [among students] about doing so,' they say," (Lief and Fox, 1963, p. 18).

Like the work of Becker et al., Robert Coombs' book, Mastering Medicine: Professional Socialization in Medical School, is an often-cited reference in the literature on cadavers (1978). Coombs, a medical sociologist, had counseled and studied medical trainees for many years when he wrote his book. In the small section titled, "Reacting to Cadaver Experience," he characterized the students' initial reactions to the cadaver as marked by: "a. nausea triggered by the heavy, pungent smell of formaldehyde; b. shock, revulsion, and a tendency to recoil upon finding the corpse so unexpectedly cold and rigid to first touch; c. depression, loss of appetite, and an inability to concentrate for a time after the first encounter" (p. 112). Most students claimed they had adjusted by the second day of dissection, although he acknowledged that they make this claim since a valued characteristic is the ability to endure experiences such as dissection without showing disgust or squeamishness. As Lief and Fox noted in 1963, "One of the earliest ways in which a first year student can demonstrate to his classmates that he has the qualities of a good physician is by controlling his feelings in the anatomy laboratory" (p. 17). Like Becker et al., Coombs reported that some students had bad dreams which he acknowledged as possible evidence of subconscious anxiety since these students performed dissection without much conscious anxiety.

Coombs clearly articulated the status of the emotional aspect of cadaver dissection in the curriculum in the seventies, "although a vast block of curriculum time is devoted to the anatomy laboratory, not a single hour, as far as I could tell, is set aside to discuss with students the impact of the cadaver
experience on their own feelings, or to justify these feelings as a part of healthy career development" (p. 114).

Model Programs

Not until the late seventies and early eighties did articles appear which were entirely devoted to the topic of cadaver dissection and which accepted the notion that anatomy was an emotion-laden topic. At the newly accredited Wright State University School of Medicine, researchers designed an innovative experimental program to examine issues regarding the student's first encounter with the cadaver (Blackwell, Rodin, Nagy, & Reece, 1979). Their program consisted of two sessions where the students wrote both instructions for disposal of their bodies and a code of behavior for the laboratory; they also viewed the cadavers before the beginning of dissection, and discussed the dissection after the first day. The data suggested that the students could tolerate examining their feeling about their first cadaver experience. While some students probably benefited from the experience, other students may have suffered from having their defenses scrutinized. Although Blackwell and his colleagues were innovators in their attempts to address the emotional aspects of cadaver dissection, their colleagues questioned the timeliness and the relevance of the experimental program.

Researchers at the University of Massachusetts Medical School, likewise, were among the first to argue that the development of a humane, compassionate, and sensitive physician should begin in the first year with discussions about death and dying in order to deal with "personal questions and emotions evoked by cadaver dissection" (Marks & Bertman, 1980, p. 48). These discussions began after the faculty realized that some students had academic problems as a response to the cadaver dissection. Their goals were to address feelings about
dissection, to acknowledge their presence in most people, and to reaffirm the
value of recognizing these emotions and others since academic failure can occur
when a student is unable to deal with these feelings.

Marks and Bertman’s work spans more than a decade, during which they
published three articles which describe the evolution of a program in medical
humanities (1980; Bertman & Marks, 1985 & 1989). In the program, they use
paintings, film, literature, writing, and small group discussions to explore the
students’ attitudes toward death and dissection; these resources are included in
their 1985 and 1989 articles. Their students affirmed that the program “has
provided a foundation early in medical education for development of caring
physician-patient relationships and for continued exploration of humanistic and
ethical issues in medicine” (Bertman & Marks, 1989). In fact, follow-up
questionnaires sent to student just prior to graduation showed that 98% of the
respondents believed the sessions were valuable and should be part of the
curriculum (67% response rate) (Bertman & Marks, 1985, p. 379). Another set of
evaluations found that “more than 90% listed the tour of the lab prior to
dissection, the small group discussions throughout the year, and the memorial
service” as the most important parts of the program (80% response rate)
(Bertman & Marks, 1989, p. 109).

Marks and Bertman also pointed out that including such discussions in the
anatomy curriculum illustrates “the value of humanities in a profession that is
becoming increasingly dependent on technology” (1980, p. 51). Furthermore,
they demonstrated that expressing one’s emotions is an important part of patient
care. The authors further compared dissection and patient care since they both
are "often the only objects of medical inquiry. The emotions and individuality of
student dissectors and of patients often escape notice. Unresolved emotional
attitudes can be the reason physicians fail to deal with the total patient” (1980, p. 51).

June Penney of Dalhousie University in Canada was the first to approach the topic quantitatively; she published the results of a 42 item questionnaire (96% response rate) on the perceptions and attitudes of medical students toward dissection, before, during, and after the experience (1983, 1985). She found that the dissection experience profoundly affected the students’ thinking about life and death, with eighty percent of the students reporting that the process of cadaver dissection had engendered thoughts and feeling about their own mortality, about the deaths of loved ones, and about the afterlife (1983, p. 223). She also found, as did Lief and Fox (1963, p. 15), that students had emotional reactions to both the initial sight and cut of the cadaver with their anticipatory reactions greater than their initial reactions. In contrast to Becker et al. (1961), almost a quarter of the students experienced “physical manifestations of their emotional trauma”; in contrast to Coombs (1978), the initial shock did not wear off by the second day, and in fact, only about one third of the students reported “zero apprehension” at the end of the dissecting experience (1983, p. 222).

Unique to Penny’s study was her finding that more than fifty percent of the students had shared their anxieties about death and dying, thereby showing a willingness to talk to others. The medical students also “related their attitudes in dealing with the cadaver experience to their future ability to deal with dying patients” (1983, p. 224). Furthermore, over sixty percent “considered themselves ‘inadequately prepared’ emotionally by the anatomy faculty (1985, p. 59), and over fifty percent of the students wanted more emotional preparation for the dissecting experience in the form of discussions on death and the sharing of their fears (1983, p. 223). Penny recommended that anatomy departments should
provide an orientation to the experience of human dissection, and she outlined necessary components of such a course.

Based on a comparison of her research to previous research, Penny concluded “Students attitudes to human dissection appear from the literature to have changed radically over the past 20 years” (1983, p. 224). She attributed this change to the trend toward more humanistic medicine and an increase in females in medical school which may have changed the overall attitudes of students, including a “willingness and ability to express feelings” (1983, p. 224). Indeed, the students seem more willing to discuss their emotions, but their attitudes toward dissection have not changed radically as evidenced by the works of Lief and Fox (1963), Rosenberg (1971), Coombs (1978), and even Becker et al. (1977), all of which showed feelings similar to those in Penny’s studies.

Gustavson (1988) also advocated for an orientation session based on his anthropological study at the University of California at San Francisco. He used the anthropological field method of participant observation where he attended the course, making behavioral observations and transcribing comments of the students. In addition, fifteen students wrote narratives of their experiences. Using all of his data, he found two recurring themes: “First, the students sensed or feared that they were becoming ‘desensitized’ to the human body in the process of dissecting a cadaver; and, second, they commented on particular emotional reactions to the dissection process itself” (1988, p. 62). The students also talked about the relationship between the anatomy lab and the process of becoming a physician, both requiring technological and compassionate competency. He argued that this relationship could be used to acknowledge the psychosocial aspects of the anatomy lab and to help the students formulate appropriate attitudes and behaviors toward patients. He noted several important areas to address, such as associations with death and dying, invasive
procedures with the step-by-step dismemberment of the cadaver, and the students' reactions to the dissection of emotionally charged areas such as the face and genitals. Such discussions would help the students maintain their competency in compassion instead of focusing on their competency in technology.

At the Northeastern Ohio Universities College of Medicine, a program addressed the dissection of the human body from a psychological, pragmatic, and spiritual perspective (Schotzinger & Best, 1987-1988). The unique program attempted to achieve closure of the cadaver experience with a memorial service at the end of the course. Memorial services exist at various medical schools, but these authors were among the first to write of such a program. The memorial service serves as a salient end to cadaver dissection, allowing the students to resolve their experiences, thus avoiding the perpetuation of clinically detached students.

**Stress and Coping**

Two studies from abroad discussed the stress of cadaver dissection and coping strategies and gave further support of the need for opportunities to discuss the anatomy lab and the emotional and professional issues it raises. A study from Israel (Shalev & Nathan, 1985) focused on the students' psychological reactions and coping mechanisms using a model of stress and adaptation. The students' responses to the stress of dissection followed a three-stage pattern: acute reaction, adaptation and development of new resources, followed by stabilization (p. 131). These responses may resurface during subsequent clinical encounters, especially in the context of death and dying; and, thus, the development of healthy responses to the cadaver is critical. Providing an opportunity for discussing emotional difficulties in addition to death and
dying may help students develop these healthy responses to be used later with patients.

The second study, from Australia, consisted of both a pre- and post-dissection questionnaire that examined the students' preparation for and their reactions to the cadaver, including their coping strategies (Horne, Tiller, Eizenberg, Tashevska, & Biddle, 1990). Although the students felt well-prepared before the dissection had begun, they were technically but not emotionally prepared. As a result, the students wanted more discussion of the experience with the anatomy staff. Therefore, the faculty planned to discuss anticipated emotional reactions and to discuss the place of cadaver dissection in becoming both technically competent and caring. The authors recognized the opportunity that the dissection experience provided to discuss "difficult topics such as human dignity, mortality, grief, and how to deal with emotions experienced by both patients and doctors" (p. 646).

Peter Finkelstein conducted a four-year study of students' behavior in the lab, and in addition, he monitored their dreams and subjective experiences (1986). He found that the lab challenged the students' adaptive strategies as evidenced both publicly, by their behavior, and privately, by the concealment of their responses from faculty and other students. These responses included intense, unpleasant dreams which often involved death and illness. A small group of students had "a profound psychological response" (p. 41), thereby proving the intensity of the experience in some cases. Finkelstein argued that educators need to understand the students' psychological experiences in order to approach medical education rationally, especially when powerful experiences such as dissection are "paired with norms of silence" (p. 42).

Finkelstein has continued to study the emotional and psychological responses of medical students to cadaver dissection in an attempt to reexamine the earlier
notions that psychological stress would be “negotiated quickly and uneventfully” (Finkelstein & Mathers, 1990, p. 220). He and Mathers built on their earlier finding that some students had a profound psychological response. Their results suggested that the anatomy laboratory provided a significant emotional challenge for many medical students, because it was “the student’s first experience with illness and death” (p. 219). About five percent of the students had reactions resembling post-traumatic stress disorder. These reactions included “nightmares, intrusive visual images, insomnia, depression and learning impairments” (p. 219). Other students had similar responses, though less severe. The authors echo the conclusion of others that the anatomy lab provides a valuable opportunity for instructors to present professional values to the students adjusting to the stresses of the lab.

D. Post-Enlightenment

Whereas the previous articles advocate various programs to begin dealing with the difficult issues in medicine, these following references go further, examining the social interactions in the lab. In Hafferty’s fascinating article on the emotional socialization of medical students, he explained cadaver stories as “narratives describing ‘jokes’ played by medical students protagonists on unsuspecting and emotionally vulnerable victims” (1988, p. 344). The stories describe medical students physically manipulating cadavers or cadaver parts to both shock the victims and derive humor from the victims’ reactions. Hafferty viewed these stories as part of the oral culture of medical training, and investigated the role of these stories in the emotional socialization of medical students. He found that these stories were told in three settings: before anatomy lab had begun, during the initial adjustment period, and when the students identified most with the cadaver, such as during the dissection of the sexual
organs. In general, these stories impart strong messages about appropriate emotional behavior in the anatomy lab. In the cadaver stories, the new medical students (or initiates) “are asked to identify with the emotionally tough, cool protagonists at the expense of the emotionally weak, vulnerable victims” (1988, p. 350). The stories further communicate that anxiety, fear, and revulsion are inappropriate emotions for the lab, and emotional competence is necessary to achieve technological competence. Hafferty argued that while these stories may provide benefit in the lab, the feeling rules which are expressed may promote maladaptive coping strategies in clinical settings.

Hafferty expanded on the above work in his tome on death and the emotional socialization of medical students in which he focused on the anatomy lab (1991). The book is based on his work for his dissertation in medical sociology where he spent half a year observing first-year medical students in the gross anatomy lab. He interviewed them about the lab and their other experiences with death and dying during the same period. Most of the previous work on the socialization of medical students has focused on the last two, clinical years of medical school where students primarily work in the hospital, caring for patients. In contrast, Hafferty focused on the first few months of medical school when the process of socialization begins. He began the book with a theoretical overview of not just the anatomy lab, but medical socialization in general. A subsequent chapter is devoted to anticipation of the anatomy lab. The cadaver stories described above were an important source of information which contributed to the students’ anticipation of the lab. He also discovered that students differed in their perceptions of appropriate behavior and reactions in the lab; yet, the dominant message was one of viewing the cadaver as a biological specimen, rather than as a formerly living person. For the students who viewed the cadaver in the latter manner, they did so privately to avoid appearing emotionally weak.
In a later chapter, "Meeting Ambiguous Man," Hafferty elaborated on the distinction noted above, namely the cadaver as a biological specimen versus the cadaver as formerly human. Many students recognized that their view of the cadaver as a specimen was linked to their need to be emotionally distant in the lab. The students who viewed the cadaver as formerly human were more likely to note the relationship between their behavior in the lab and their future behavior with patients. These students were more concerned about becoming emotionally detached, whereas the former group felt that emotional distance was necessary.

The last chapter on the anatomy lab, "The Cadaver as a Future Self," expanded on the above theme of viewing the cadaver and also looked at the lab as a "source of feeling rules" (p. 150). Hafferty discovered that the other students played a key role in the development and subsequent internalization of rules about appropriate feelings in the lab: "Medical-student peers had considerable impact in the emotional ambience of lab, whether acting directly as sanctioning others, assuming the guise of potentially threatening others, or functioning simply as live presences in a room otherwise occupied by the dead" (p. 151). In addition, he discovered a gender-based difference in the students' view of the cadaver as a biological specimen or as a formerly living person:

We found that female students were more likely to consider their cadaver as a formerly living human being, more willing to address the anxieties inherent in that perspective, and more sensitive to lab as a multifaceted and ambiguous situation. Females were also more active and accurate reflectors on their own past behaviors and attitudes and more accurate reporters of the subjective states of others. In sum, women as a group appeared to experience the anatomy-lab encounter more fully and in a more flexible manner than did men. (p. 152)
It is impossible to adequately summarize Hafferty’s book, the first devoted primarily to medical students and the anatomy lab. Hafferty has succeeded in intertwining theory and anecdotes in his enlightening work.

As mentioned above, Finkelstein touched on the “norms of silence” regarding the emotional aspects of cadaver dissection: “The emotional reactions of students to the course, since the faculty assumed them to be negligible, received no attention during staff meetings” (1986, p. 27). As we can see from Hafferty’s work, the emotional reactions to the cadaver are kept private to avoid appearing emotionally weak. Jane Louise William addressed these norms of silence in her insightful article, *Don’t discuss it: reconciling illness, dying, and death in a medical school anatomy laboratory* (1992). She referred to these norms as a “conspiracy of silence between professors and students and between students and their fellow students” (p. 65). She spent fourteen weeks in the gross anatomy lab as a participant observer and also used unstructured interviews to collect data. She discovered that the students were convinced that the “faculty is not uncomfortable with cadaver work and that ‘there is no place for such discomfort in medical school’” (p. 72). She then interviewed several faculty to determine the accuracy of the students’ perceptions. The faculty acknowledged that the peer pressure existed among the students to not discuss their feelings; however, the faculty did not think that this peer pressure was correlated to their own attitudes about dissection. She described a “two-fold strain” in the lab where the professors were uncomfortable with the yearly ritual of the lab, and the students were uncomfortable with their first cadaver experience. In addition, this strain was compounded by “the conspiracy of silence between professors and students and between students and their fellow students: ‘Don’t discuss it’” (p. 72).

One male student spoke movingly about the lack of opportunity to discuss the dissection experience with anyone:
You'd think we were some kind of machines: just keep digging, you know, find this, find that, well ... In the beginning I dreaded coming here. I couldn't get out of bed I'd have so many beers just thinkin' about going. I'd miss lecture and then miss lab. I really wanted to say, "Can anyone help me deal with this stuff?" But there wasn't anyone around. I don't think they [the professors] really understand what this is like for me. I couldn't tell my friends because they would have laughed at me. Then one day I cam in here [the lab] and I was just--I don't know how to describe this--I was just numb. And I've been that way ever since. I still drink too much though. (pp. 74-75)

From the first days of lab, William observed the faculty separating the humanistic aspects of dissection from the technological. Indeed, the faculty acknowledged that they discouraged discussion of these humanistic aspects, such as death, denial of death, grief and loss.

William has documented, for the first time, the conspiracy of silence in the anatomy lab. Furthermore, she has shown that the behavior of the faculty directly affects the behavior of the students; she concluded that these early faculty-student communication patterns are brought to the doctor-patient relationship. If the faculty fails to encourage discussion concerning the lab, an opportunity is lost, and student will continue to believe: "The motto here, the one nobody ever states out loud, is: be cool, do your work, look comfortable even when you're not, and keep digging" (p. 74).
Chapter III

Methods

The Study

My purpose was to examine the experiences of medical students in the gross anatomy laboratory, including their thoughts and feelings about dissection. Many of these thoughts and feelings are not widely shared with fellow classmates, so my hope was to explore these experiences via in-depth, one-on-one interviews with students currently taking gross anatomy.

The study consisted of open-ended interviews with eight first-year medical students at a traditional, four-year medical school in California. These students were notified of my study via a memo placed in their mailboxes at their university. This memo described the study and included the informed consent form to be later signed by the participant. The respondents were asked to contact me either by telephone or electronic mail if interested. Seven students, five women and two men, initially contacted me, mainly by electronic mail. One male failed to follow-up, leaving me with five females and one male. I then placed an additional memo in the mailboxes of the first-year male students; two responded, one of whom was the student who initially did not follow-up. Together we arranged an interview time and location. Five of the interviews were in the homes of the students, two were in private conference rooms at the university, and one occurred in my home.
At the time of the interview, the students were shown the informed consent document again. The students were asked to give consent by signing a separate, blank piece of paper which would not attach their name to any form which could connect them to my study. At the same time I assured them of the confidentiality of the interview, emphasizing that I would remove any identifying data from my transcripts.

Individual interviews were conducted with each of the students using an interview guide, a list of general areas to be covered with each student. The interviews lasted around one hour; they were audiotaped and later transcribed by me. Each consisted of open-ended questions organized around an interview guide, and began with a general, open-ended question about the student’s experiences. The questions covered most of the following topics:

- exposure to dead bodies prior to medical school
- anticipation of the anatomy laboratory and dissection
- orientations to the laboratory experience
- first experiences with the cadaver
- dreams about the anatomy laboratory or cadaver
- thoughts about death and dying evoked by the laboratory
- those people with whom the students shared their experiences
- tone of the anatomy laboratory
- dynamics of the dissection groups
- positive ideas about anatomy

Confidentiality

To maintain the confidentiality of the informants, several precautions were taken. The transcripts were labeled with a code, and a master list of the subject’s name and code was stored in a locked place. The audio tapes and the transcripts
were stored in a separate, locked location. All identifying information was removed from the data, and any questionable information was deleted unless approved for inclusion by the student.

Analysis

The interview transcripts were analyzed using quantitative research criteria. First, I removed all identifying information from the data. Second, I read through the transcripts and looked for themes in each response. Then I grouped the statements by common themes and chose emergent themes that best reflected each interview. Finally, I looked for common themes among the interviews. A summary table of the subjects appears below.

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Chapter IV

Results & Discussion

Kathy

Kathy, an insightful twenty-three-year-old, started medical school immediately after college. The key emergent theme from our interview was the discrepancy between her expectations and reality. Kathy expected that new and unusual situations confronting the students would be discussed. The reality was they were not. She spoke movingly of the first gross anatomy lecture on the anatomy of the breast:

... we saw a video on breast exams, um, really kind of a ... pornographic video, you know, this woman with no shirt on there in front of all of us, and, and it was our first day of anatomy, and I didn't—didn't know my classmates, and we were all ... fresh and green ... it just was a strange environment ... first of all we were going to do the breast and we were going to talk about it in this objectified way, and that ... shouldn't have been an issue for any of us—we all were supposed to be very comfortable with that, and, I found that really strange ... and I think that what was most shocking was that ... we all had to sit there in silence ... sort of watch this, and then we didn't really have a response to it.

Kathy was shocked that the first day of anatomy began with the dissection of the breast, and furthermore, that a video of a nude woman was shown during the first anatomy lecture. Even more shocking was that no mention was made of either of these seemingly unusual events for the first day of school.

This discrepancy between expectations and reality also occurred with the surface anatomy component of the course. In surface anatomy, groups of twelve

2 all names have been changed
to fifteen students gather with one instructor and draw on each other’s bodies with markers to help visualize internal anatomical structures such as the heart, lungs, and liver. The faculty gave the students the option of having a single gender group or a mixed gender group. Kathy paraphrased the instructors:

... if some of you think you might feel uncomfortable, in a ... group with members of the opposite sex, well, then you can make a note of that, too, but really it’s fine, and any exercise we do can be done wearing a bra or halter top, so there’s really no reason for anyone to feel uncomfortable about it.

Kathy’s response demonstrated the incongruity between her interpretation of the situation and that of her instructors:

I was just sitting there, like, oh my god, this is very strange, like I have to ... sort of put myself out there saying, ‘No, this would kind of be uncomfortable for me,’ you know, I’d have to sort of make more of an issue of it then the instructors expect ... so basically we were all just supposed to not have any problem with the whole thing ... we were going to go into this room with our classmates, and take off our clothes and no one was supposed to have a problem with that ...

Kathy was surprised by the expectation that she should be comfortable having male students draw on her body while she sat in her bra, yet she felt uneasy raising the issue that she did feel uncomfortable. The reality communicated was that she should have had no problems with either the breast exam video or the mixed gender surface anatomy group.

Both of these examples deal not only with the discrepancy between expectations and reality, but also with sexuality. Issues of sexuality surface as students are forced to interact with dead human bodies and their sexual organs in a manner never previously experienced. A layperson recognizes that this
interaction is beyond the realm of normal human experience. However, the students are given no opportunities to discuss these issues. If they are lucky, the students feel comfortable sharing their feelings with a friend:

... one friend commented to me that she just--she just felt so dirty 'cuz they were there with this female cadaver, and everyone was standing around looking for her clitoris... and she said, 'I--I just was trying to imagine what that women would think of what we were doing, you know... the dissection of the pelvis was a very strange... very strange experience...

Yet in general, the theme of sexuality and its presence in the doctor-patient relationship is rarely addressed:

... and the other thing... that's not emphasized or discussed, is that it's a sexual thing to show your body to someone, and... it becomes very clear why doctors find it so easy to take advantage of their patients sexually... when it's never discussed--when it's presented as such an asexual thing when we all know that it's not... there's no way that it could be for a... man and a woman to be in a room--him touching her, you know, as if that's somehow simple and objective and neutral... just couldn't be. So, I--I really felt like, that should be discussed somewhere...

The theme of sexuality pervades the relationships of the student to both the living patients and the dead cadavers. For Kathy, the necessity of recognizing this sexual dynamic was obvious, but the reality remains that the faculty did not address it.

Another emergent theme in the interview was the objectification of the body, that is, viewing the body as simply an object or, as Hafferty says, "as a biological specimen" (1991, p. 102). In her earlier quotes, Kathy discussed the objectification of the bodies of both the cadavers and fellow classmates in relation to the breast dissection and surface anatomy. Kathy also experienced
this view of the body during the orientation week when the students were
allowed to preview the anatomy lab:

the first thing that was disturbing to me was... when we first went in... the room's just so packed with bodies and they're--they're on these high tables--so it's sort of this sea of bodies, and... that was very disturbing to me, to feel really claustrophobic, but the most shocking thing was... walking past one of the tables and... there was a piece of tape marking one of the bodies, and it had a number and it had a female symbol, and it was basically, you know, this is cadaver number 0746, and it's a woman, and that to me just was so shocking--it was just very objectified, as if... this is all that this person is now is just a woman and a cadaver number... now when I think back about that, I was--I was very disturbed, and I left the room and I was thinking about that for days really...

At first, the disturbing experience was the "sea of bodies", and also the
reduction of the former living person to a piece of tape with a name and number.

These disturbing events force the student to cope, and many students and
physicians cope through desensitization to that which was previously
disturbing. However, this method of coping, itself, is disturbing because the
student eventually objectifies the body without realizing it. Kathy spoke of her
desensitization to the above experience:

... now I just find that I'm so much more neutral about the whole thing-- it's a weird--kind of frightening thing. I'm not sure where that came from, and why that came so fast... (you) gotta get used to it fast or you get very, very much left behind... noticing that change was frightening, and not really knowing... where it had come from, because... death and objectification--those are not really things that can become resolved or that you can find an answer for or feel comfortable with... so I almost felt like my comfort meant that I had become dull to those things, that... the issues that had... at first they had shocked me, and now I felt like, for some reason, they weren't challenging me anymore, and I could walk through this experience that is really very unique and very intense and not be as affected by it... I think that's partly what's frightening about medicine is that you're embroiled in so much that's so intimate to people, and you do it everyday, and you kind of have to get to the point where...
it's not important to you—it's only minimally important, or you're paralyzed... and that's—that's a frightening thing...

So one copes by becoming desensitized, but that desensitization is frightening itself when one acknowledges it.

Sarah

Sarah, like Kathy, also noted a discrepancy between her expectations and the reality of the anatomy lab. In Sarah's case, she expected the lab to be harder to deal with than it was, and she became concerned when it proved to be easier than she expected: "I was actually a little worried that it didn't bother me..."

When questioned about why she found the dissection easier than it was, she did not have specific answers. Yet, interestingly, she implied that people who have an easy time are courageous, but she considered herself as a wimp; therefore, she was surprised that it did not bother her.

Some of Sarah's expectations came from the orientation session where a panel of second-year students spoke about their experiences the previous year. She felt that the panel contributed to her expectations, because the students mainly spoke about their "traumatic" experiences. This is where she first considered that she might have some of these negative reactions, "Well, geez, well maybe I am going to have all of these reactions, and so I think that's kind of what stirred me up more than I normally would have been, and then, I think, it also made me think, what's wrong with me now that I'm not having any of these problems."
The students emphasized their “traumatic” reactions to the point that Sarah questioned what was wrong with her for not having them, “…they kept saying, ‘It’s okay if you have a problem with it; don’t worry if you have a problem with it,’ and so I was trying to analyze myself too much, like where is the problem that I should be having.”

Sarah felt the same way when she visited the morgue with one of the teaching assistants (T.A.) and expected to react differently than she did. She described a refrigerator filled with recently expired people, spoke of her reaction when the T.A. pulled out a body:

… again it was one of those things where I thought it would bother me a lot more than it did, but I really—it was kind of like looking at an empty shell, and … I just really felt like the spirit was gone … and like I said it was just an empty shell, so it didn’t bother me as much because it wasn’t like somebody was suffering, or whatever, it was just … a body …

The latter part of this quote addressed another theme woven throughout the interview: Sarah’s concept of the spiritual world and what happens after death.

She first mentioned the spirit in the above quote in the context of the morgue.

Sarah then spoke of the spirit of the woman in the morgue when talking of her own death:

I’ve been wrestling with … what is going to happen to me, where do I go, what is the right way to think … so I think it does bring up the question more … what has happened to this person’s spirit … where are they now, or are they anywhere … even when I saw … that woman that was newly dead, … and just wondering … what is it about her … that’s not there and what’s happened to it, and where’s it gone, and kind of the same thing with me, … I think you realize, too, your … own mortality … . when you’re working on a dead body realizing, I’m going to be dead. This could be me laying on this table, so yeah … I have thought about it more.
Sarah also thought of her own mortality in relation to the cadaver dissection, and she identified with the cadaver, visualizing herself as a cadaver one day. In his book, Hafferty discussed this concept of "Cadaver as a Future Self" (1991, pp. 119-121). He noted that experiencing one's cadaver as a future self is threatening to the students as they realize they are going to die, too. He also found that most students deny that lab brought up thoughts about their own death and dying, although some students readily acknowledged the cadaver as future self.

Sarah elaborated on how she had been thinking about her own death more, and she mentioned the spiritual world again:

It's been confusing, because I'm...confused about it anyway, and it seems like the more questions I ask, the more confused I become, and... I'm pretty sure there's a spiritual world... but at the same time, what does that mean, and so--I think because there isn't anything tangible for me, I just kind of go in circles, and basically confuse myself more, so, like I've said, I've thought about it more, but it hasn't really answered anything (laughs) for me.

Sarah made one last reference to the "spirit" or the "person" while talking about her experiences with death before coming to medical school. She spoke of a friend who had died and of the deaths of several patients in a hospital where she used to work. Once again she talked about the person (the spirit) in relationship to the body, "... it was just like a shell... of a person... and I think if anything, that's what bothers me the most... what happens to the person, not so much the body." In this quote, Sarah clearly separated the body from the spirit, and
perhaps it was this clear separation which made the dissection easier than she expected.

The final theme I will discuss from Sarah's interview is her self-identification with the cadaver, or as Hafferty calls is, "The Cadaver as an Anxiety-Provoking 'Human Referent'" (1991, p. 90). Hafferty reported that students are often most bothered by prostheses of the head, face, and arm, and by dissection of the neck, pelvic, and perineal regions. Although he did not mention the breast as being an anxiety-provoking area, several students mentioned it as such in my interviews, including Sarah:

... and I remember the very first dissection was a little strange only because we dissected breast—that was the very first thing that we did... that was really strange... especially since I'm a woman, it was kind of like, this is my breast type of thing, so I identified that way, but once we got into it, it didn't bother me at all.

Although Sarah admitted that it did not bother her once she got into it, she elaborated about the breast and her identification with the cadaver:

... I kind of identified... thinking... "Ooooh,"... "this is my breast,"

... and it was just strange... I don't know how exactly to describe it--just to say I felt funny, like this could happen to me, or somebody could be doing this to me... and I think it was just the fear, too, of actually cutting into somebody's flesh, but like I said, once I did it, then I was more interested in what was going on, and how it was all put together, and it didn't bother me as much.

One further area of identification for Sarah was the perineal region. I asked Sarah if she remembered any uncomfortable feelings as they dissected the pelvis. She elaborated:
I remember when we were trying to... look for her clitoris... it was... one of those things like, "God, you know, I have a clitoris,"... It’s just really strange to look at it that way... you have... half of your labia... it was just really strange, and in a way... I don’t think it was hard to do the dissection, but I felt in a way it was almost like blasphemous against this woman, because here she is, she’s lived her life, she’s an old woman, and we’re looking for her clitoris... it was just really weird. And I felt... like she was so exposed... that was hard for me in that respect.

Although Sarah identified with the cadaver’s sexual parts, she was not particularly bothered by the dissection of the breast once she got into it. She seemed more bothered by the dissection of the perineal region which occurred several weeks later. Likewise, Hafferty witnessed “widespread abandonment of the norm of detached unemotionalism that had reigned for so long in lab” (1991, p. 92) only during the dissections of the pelvis and perineum. Some students refused to do the dissections; others refused to come to lab. Many male students “abandoned all pretense of emotional detachment and asked their female lab partners to take over and dissect the penis” (p.92). The students were shocked that they were upset by the dissection, feeling they had become emotionally complacent during the previous weeks.

Rachel

Rachel was an older student who returned to medical school after working for a few years. Her experience might be summarized by her opening statement, “The anatomy class was my biggest fear coming to medical school.” This concept of fear appeared throughout the interview as she discussed both the
trauma and violence of the cadaver dissection. The two main themes I will discuss are Rachel’s inability to distinguish between the living and the dead, and how this lack of distinction leads to feelings of trauma and violence.

Rachel explained the violence of the cadaver dissection:

I just am in there all the time . . . really feeling tortured by the fact that we are injuring . . . people . . . somehow I just don't get it that they didn’t come to a violent death, that what we're doing to them is in fact not a violent thing . . . It feels very violent, what we do.

She then addressed her problem, “I don’t stop to think the person who used to live in this body is already gone and there’s no one feeling any pain. I look at that and think, ‘My god, something awful’s happened.’” Because Rachel was unable to distinguish between the living and the dead, she was tortured by the dissection, as if she were cutting up a living person. She even had a dream in which the cadaver was alive, “I just imagined that he would sit up . . . and he’d be really mad ‘cuz we had already taken out his lungs and heart, and stuff like that...He’d be like, ‘What are you doing?’” Other students have dreamt of their cadavers as alive beings (Becker et al., 1961, p. 105), but Rachel was unique: she was aware of the trouble she had making the distinction between the living and the dead and in being able to find meaning from her dream. She interpreted her dream as follows, “So that was my clue that I wasn’t separating—I wasn’t really getting it that, that...the person was gone from the body. I don’t have a good concept of the body just being a shell that somebody inhabits for a period of time...I sort of see our cadaver as a person as opposed to...just flesh or something.”
Viewing the cadaver as a person caused Rachel torment throughout the dissection. For example, she described the dissection of the wrist joint where the hand was flipped back on the arm in an unnatural position. All day long, classmates viewed the dissection, and the hand was repeatedly flipped back and forth like a hinge. Rachel commented that it "... looked like some traumatic ... violent thing had happened, and ... I don't stop to think the person who used to live in this body is already gone and there's no one feeling any pain. I look at that and think, "'My god, something awful's happened.'"

These themes of violence and trauma were especially prominent as Rachel decided to stop attending lab, just before the disarticulation of the head from the rest of the body. Although she did not attribute her decision entirely to the violence she anticipated in the lab, she articulated her concerns, saying that she felt like she was living in a horror movie:

Like right now, I have not just... nightmares, but... sort of intrusive thoughts in the daytime because I know that when we go back to lab... if I were to go back to lab on Friday, they would have disarticulated the skull... what I keep picturing is these little heads just sitting up on the tables... So, I've been picturing--no one has said this--but I've been picturing that I'm going to go back and all the rest of the body's going to be gone... and all's that going to be left is this little head sitting on the table--36 of them all the way around the room, and... I don't need to see that. That's too much like a horror movie... The whole thing feels like a horror movie, it feels like living in the middle of a horror movie. I mean, the kinds of things my friends have... liked to go and watch, and be shocked, and I could never stand to go and see, but I feel like I'm living it.

When I asked Rachel why she thought that anatomy lab would be an issue for her years before starting medical school, she replied that she "saw a lot of violence as a kid." She felt that she, too, would be committing violent acts by
dissecting the cadaver, especially since she could not differentiate between the living and the dead. Not surprisingly, the themes of violence, trauma, and horror were scattered throughout the interview, and certainly colored her experience in lab.

Kim

Kim’s overwhelmingly positive attitude was a unifying theme of her interview. She maintained this attitude even as she talked about death, another prominent theme. Two of Kim’s grandparents had died recently, and therefore she had much to say about death. Yet most striking was her view of death. Her grandfather had been dying for two years, and she saw his dying positively because he was able to wrap up his affairs, “...it’s weird to say that’s a positive experience... but it’s sort of a model for me of how I want to go...” Kim also viewed her grandmother’s death in a favorable light even though her grandmother had not lead a full life like her grandfather and had been “dragging along for a long time.” In spite of this, the death was a relief, and therefore a positive event, or as she states it, “...in both of those cases, death was not a negative experience.”

But more striking was her view of the funerals, a view usually attributed to the Irish and their rowdy wakes filled with merriment. However, this was not what she had in mind:

I think there’s a sense in our family that funerals should be a celebratory event, and it’s a time when you get together and talk about what a great person this was. So that was definitely what we had for my grandfather,
and it was nice in a way because I learned a lot about him that I hadn’t known.

While touching on her view of life and afterlife, she addressed the obvious question: is her attitude based in religion?

... we’re not religious so there were no religious overtones, and I would say, probably pretty universally in my family most of us believe that life ends at death... she (her grandmother) said, “The candle’s going to blow out, and that’s the end.” And I really like that image, it’s like the magic will leave the physical presence, and that’s the end.

Although Kim seemed comfortable about death as the above passages suggest, there was a juxtaposition of fear when she spoke about losing her significant other:

... the only thing that could go wrong (in the relationship) is that one of us could die... actually last summer, right before we started medical school, I--I got just really paranoid... actually part of it was... a little minor earthquake... that was my first earthquake, and so, just the sense of fragility, like, if anything happens to him... there’s going to be a huge hole in my life that... I don’t know if I would ever be able to replace...

Kim spoke of her paranoia again later in the interview and admitted that she worried about becoming ill at a young age; but she acknowledged that her own death was less scary than the death of her significant other. Interestingly, she attributed these fears to her stage in life rather than medical school, and to the fact that she could lose things she was committed to, such as a family. There is no way to know if Kim’s views on life and death were at all shaped by dissecting a human in the anatomy lab, but it is tempting to speculate that they were.
Kim's attitude toward death extended to the anatomy course. When speaking about anatomy in general, she had the most overwhelmingly positive view of all the students I interviewed, "I love anatomy, and last term it was by far my favorite class. Part of that is the quality of teaching. It's superior to most of the other classes... my word for it is that it's 'cosmic.' I mean, doing a dissection is really... incredible..." In addition, Kim was able to make the transition from viewing the body as an inanimate object and then an animate object. Twice she commented on this in a positive way:

... going back and forth between this inanimate dead thing, and the living thing, you know, if you're intimate with someone, you get, sort of full inspection of the nude body. It's just amazing... it's really magical. And I found that most intensely now that we've finally come to the face, you know... it's... part of it's just sort of getting to know a new space, understanding how... the skull relates to the face, but also just pulling apart this inanimate thing, and relating that to something that's animate is really... magical...

"Magical" represents Kim's experiences in the anatomy lab, and in life, I suspect.

**Ruth**

In her opening interview statement, Ruth characterized the anatomy lab as both awe-inspiring and disturbing. The disturbing aspect of the lab arose from the process of disassembling the body:

... feeling disturbed at what we're doing in the process of taking the body apart... and the way you have to kind of destroy things in order to see them, and in order to see the next layer below that, and... disassembling the body piece by piece... and at the end... kind of seeing the process of the body being whittled down is a little disturbing sometimes, and...
that was even more dramatic... when they just took away the whole body from the chest down after winter break, and now there are all these half bodies... and... at this point they've cut the skull in half so there's half heads... and seeing that done to a face and having the face completely... not a real human face anymore... is really kind of strange.

For Ruth, it was not only the act of disassembling the body, but the realization that the experience was unnatural or out of the realm of normal human experiences:

... every once in awhile I do have these feelings looking around like... this is really kind of bizarre (laughs)... I guess, it's such a very special context that makes it okay to do what we're doing, but when you think about it, and... suddenly... think about other contexts or just how inappropriate it would be to be doing (laughs) these things anywhere else it feels really kind of bizarre and shocking.

I asked her to tell me more, and she elaborated by mentioning the violent nature of the dissection:

... part of what can be weird is... the kind of violent nature of it... like taking a saw and... cutting through the bones or taking a hammer with the jaw bone, and just kind of smashing against it, and it's... very weird seeing someone—a professor who's a normal, good person, talking about how you aim the hammer and how you have to really ram it hard against the jaw to get through to this nerve... and you think, whoa, this is... something that... people, like torturers would do, or that in wars... There are all of these horrible contexts where you talk about how to cut through bones or bodies or destroy things...

She said that she had not discussed this aspect of the dissection with others, but that the class reacted to these invasive dissections through nervous laughter when the instructor explained the dissection; also, students backed off when it came to using the tools, such as the saw. Furthermore, Ruth questioned the
appropriateness of the enthusiasm of the students who were interested in the

dissection:

... then other people are... really interested... and... that's kind of a--
a delicate thing, like... why... why are you so excited (laughing) about
doing this?... they seem interested in it in an okay way... because... a
couple of them want to be surgeons... and... there are just some people
that seem really curious and kind of want to give everything a try
themselves...

She concluded that the attitude of these students was okay, but noted that
students who were too excited might be suspect.

Ruth found the anatomy lab to be awe-inspiring. She said that the anatomy
lab was one occasion to see "the most evidence of just how incredible the body is
and how it's shaped, and just what it can do... and that is really exciting... so
I guess one of the experiences I've had from the lab has been... feeling really
moved and... awe-inspired by it." She reiterated this later in the interview, "I
just find it awe-inspiring seeing the--the intricacy of--of all the structures...and
just how--just unbelievably complicated and intricate it is..." The awe-
inspiring nature of the body forced Ruth to evaluate her concept of a supreme
God. Her ambivalence about God's existence was evident:

... it's not... thinking that it was created by some higher being, but--but
just seeing how... well, in a way, it makes me... kind of more skeptical
of... how things could've evolved, and not been created because they--
everything is so perfect, it just seems incredible that evolution could
account for that... and I still don't believe in God, but in a way... before
... it didn't make sense to believe in God, and that was kind of this
obvious thing people had invented to explain things, and--and now--it
seems harder not to believe in God (laughs), because it just seems so hard
to believe that things could have just spontaneously arisen, and... work
that well, and be that...
So Ruth's questioning of her "world view," as I will call it, was an unanticipated result of the cadaver dissection for both of us.

**John**

John was very concrete in his interview responses. John answered many of the questions differently from the other students, often focusing on the course content, rather than on his own feelings. In his opening statement about anatomy lab, he spoke of the interesting parts of the lab, "being able to see the heart and--and hold it in your hand, and being like able to see the aorta which is like a big garden hose in your body," and he quickly added that he was not bothered by anything in the lab. When I asked him about his anticipation of the lab before starting medical school, his answer focused on the pace of the class, rather than the anticipatory stress often mentioned by students. He also added that "nothing really about the body phased me . . . that's partially because . . . everything looked like out of a book . . . it looked real . . . it didn't feel like a person I knew one minute I was talking to a minute, and then . . ." And he further stated that: "the cadaver just . . . seemed . . . very inanimate to me, and very--not even like a person . . . and I think that was because the coloration, and like I said--I was trying to think of . . . what it must have been like when the person was real, but it just wasn't . . . it was just so inanimate at that point."

John offered an explanation for his lack of reactions to the cadaver. He described his recent experiences in the emergency room with "real blood and real
... organs, and a real beating heart... that go me queasy, but... the anatomy lab... in a way it was so distanced because... the subject was so... prepared and it was very pale and... it wasn't as bothersome for me."

Richard

Richard, a student with many life experiences under his belt, spoke mainly about these experiences rather than anatomy. Throughout the interview, he shared his knowledge of the world and of literature.

Richard seemed to enjoy discussing the macabre. His way of answering questions involved briefly mentioning things that are out of the realm of normal experience in the U.S. When he did not elaborate, I prodded him and he seemed pleased to share his knowledge. For example, in response to one of my earlier questions, "Did you have any concerns or thoughts about anatomy before you started medical school?" he responded nonchalantly, "... it was an interesting concept to me. I'd seen dead people before, not in this country, but um... no, it didn't really." When I asked him to elaborate about his experiences with dead people elsewhere, he responded:

(1) saw a body float right by our boat... no one paid any attention to it. There it goes. You don't really check dental records in China... I guess I went down to Guadalajara during college with some friends, and they have that—it's a really macabre museum set up where they were renting spaces in the graves, and those people who couldn't pay for the allotted amount of time were initially, I guess, put in the basement of the church, and now they're in this—it's really a weird museum set-up. You look at all of these emaciated, dried out bodies. It's kind of strange.
When he did respond, he often was vague, thus forcing further questioning. Asked to clarify the above quote, he offered, “In Bali, I’ve seen them burning people, but that’s kind of abstract.” The interview contained many questions seeking clarification, while a macabre theme ran through most of the answers.

Richard seemed unaffected by the anatomy experience, for he had had many opportunities to observe death before. His nonchalant, macabre answers extended to other questions. He spoke of his significant other’s exposure to death, which was strikingly similar to his own. “She’s remarkably unphased. She found a guy in college who killed himself, and she was the first one to find him, and just went up to see if he was okay, and he wasn’t, and (it’s) sort of interesting to see how bright blue the creases in the fingers are, and it didn’t really disturb her that much.” He attributed her nonchalance to the fact that she, too, had traveled and seen death in other countries. The inclusion of the “bright blue creases” in his response was an interesting detail to include as proof of a certain level of comfort with death.

Other comments by Richard seemed to be chosen for effect, for he talked of them casually, although he acknowledged them as disturbing events. For example, he discussed his fixation on the dissection of the hand, and spoke of his actions in detail, laughing as he said:

... one last disturbing image before we’re done... you clear the skin out, you find the plane of the skin, and you shove your fingers under there--but to shove my finger under the skin of her hand, and then under her finger--it’s um, a disturbing image to force your finger through somebody else’s finger--it make me pause a bit--you think what would happen if somebody did that to your hand--it makes it that much more personal.
Throughout the interview, Richard often answered with literary references. For example, I asked, "You say you thought about it (anatomy) a lot. What kinds of things did you think about it?" Richard replies, "Oh just the concept of death, the concept of decay, whatever that syllogism is, 'Caius is a man, all men are mortal, I am a man, I'm mortal,' whatever." When I asked what subjects he talked about with his significant other or his labmates, he described:

... I also really like the Latin. I think it's entertaining that you have goose's feet, and you have shallow vinegar dishes, and like pudendal, I think that's so funny—from pudea—it means to be ashamed, like the external genitals, or lumbricals, earthworms, it's great. It's very male, too. All these anatomists, like mastoid means "looks like a breast," you know that's a male anatomist.

On the one hand, he acted as if I was familiar with the references because of my anatomy training, and he did not state the Latin word for the goose's feet and the shallow vinegar dishes; yet, on the other hand, he explained the meaning of pudendal and mastoid. My interview with Richard provided me with a challenging transcript to interpret.

Mark

Mark's interview was filled with humor and joking. He often did not respond to my questions, choosing instead to make a joke. However, early in the interview he related one upsetting experience which he had not discussed with many people:

I'll tell you one thing that really upset me 'cuz this is one thing which—I haven't really shared it... with many people—I don't know, just because, I haven't but... One of the things that disturbed me the most about the.
anatomy was when they were doing the prosections ... One of the cadavers had like especially thin skin and didn’t have like the subcutaneous fat like attached to it, and just like these images of like ... lampshades, like the holocaust, sort of, or the Showa I should say, popped into my head, and it made it really difficult ... to look at that cadaver, just because it was quite a vivid image ... it was like this thin, sort of like parchment type of skin, and it was not—that was not a happy thing.

He continued with a description of his difficulty adjusting to the lab,

The first day ... it took me a lot--awhile to get into the lab, and ... I’m kind of peculiar in that ... I’ve this thing where I don’t want to touch a cadaver ... with bare hands or ... have cadaver on my clothes or anything, and I ... went through like an air-lock thing (laughs), you know, um, I--I stole scrubs and would wear those ... I was not into having cadaver on me which is like contrary to a lot of people’s—like there are some people wearing really nice clothes in lab, and I just couldn’t understand how they could do something, ‘cuz it was like so disgusting—the smell—it was particularly bad when you would go and take a shower, and like all those fumes come out of your hair... so—so there’s that sort of—that sort of repulsion element, like if it’s a dead thing, and ... also the ... first few labs ... took awhile to adjust to it ... I think I was a little quea—not queasy, but ... just pretty—like sort of tense and anxious.

In spite of these difficulties, Mark did not talk to classmates about these experiences. In fact, when he talked to friends outside of medical school, he tried to “gross them out”:

I remember e-mailing this one passage from Grant’s dissector ... “Be sure to... sop up all the fat which might of liquified...” or something, “... otherwise it will be really disgusting,” or ... something like that, and ... all my friends were ... sending me negative e-mail, like, “You jerked us.”

While Mark might have engaged in this type of interaction, he admitted to not sharing other events with anyone.

In addition to disliking the early experiences in the lab, Mark also disliked the act of dissecting:
I didn’t like dissecting much . . . which was really strange and I wasn’t very good at it because I like cooking, and I’m very good at . . . doing dissections of . . . a chicken or something . . . like taking out all the bones, and . . . remodeling it and stuffing it, so it looks like a chick . . . without any bones in it. And that’s no problem, but when I got up to the lab, I just didn’t like cutting into like flesh, and that first day was kind of difficult, that first incision was very difficult.

He also disliked the fatty tissue, which was the impetus for his e-mail message above, " . . . it was like particularly disgusting . . . it was like, ooooooh, gross, 'cuz I mean, fat is really--dead fat is really--and . . . our cadaver was . . . quite a hefty fellow (laughs) and . . . he had plenty of lipid...plenty of liquefied fat. It was really disgusting."

In spite of these reactions, Mark had attended several autopsies and planned to attend more. He spoke about the anatomy lab in relation to the autopsies. He mentioned the coroner’s ability to maintain emotional distance during the autopsy, and how the smell was worse in the autopsy room than in the lab:

I thought--after a year of not having done an autopsy, (the) autopsy’s not going to be a problem because there’s nothing that smells worse than formaldehyde . . . and I had forgotten how bad blood smells, and, oh gosh, and . . . when they open up the um, abdominal cavity . . . that smell is really difficult . . .

When I asked him why he kept coming back to the autopsies, Mark had no ready answer, though he mentioned their shock value and his need to feel more comfortable with the autopsy.

The interview with Mark was a mixture of insightful answers and a joking avoidance of questions. On the basis of his quotes, it is clear that Mark had
intense feelings about the lab. At the same time, however, he seemed to be
coping by using humor in his responses and recollections.

To summarize, my study consisted of eight interviews with first-year medical
students to elicit their thoughts and feelings about the gross anatomy lab and
cadaver dissection. As the sample was small and the students were self-selected,
the results of these interviews cannot be generalized necessarily to the first-year
class as a whole. Nonetheless, I will draw some conclusions about the eight
students which might be used as a window to the experiences of first-year
medical students in general.

Different Experiences

The only valid conclusion which applies in equal measure to the entire class is
that each student had a different experience in the anatomy lab. For Rachel, it
was "her biggest fear coming into medical school," for Kim it was "by far my
favorite class," for Richard, "an amazing experience," and Sarah "thought it was
going to be a lot harder than it was." Although each student reported a different
experience, some common threads appeared in several interviews. I will try to
trace and summarize these below.

Orientation

All eight students viewed the orientation to the anatomy lab positively,
though some students expressed reservations, and one student criticized the
composition of the panel of second-year speakers. Some of these positive statements follow: Rachel says, "... they really set it up well, in the beginning... the way they set it up, is like, 'You have as much permission to have trouble with this as you need,' and... it kind of gave everyone permission to have some feelings... it sort of made everybody have to be a little sensitive about it because it was built in to the program..." Kim states, "I thought on the whole it was pretty good. I mean, I--I guess I was so impressed that they were having it at all." John shares, "I think it was a good thing... it made us go in there with a certain degree of seriousness... and to realize that the people that had given their bodies were real people, and that we shouldn't take it lightly." Sarah adds, "... they did a good job in--in telling us... making sure that we were respectful of the bodies, and letting us know that these people... donated their bodies." For these students, the orientation communicated seriousness and respect toward the cadavers and opened up the possibility that students might have some feelings about the dissection experience.

The orientation to the anatomy lab occurred the week before classes began and consisted of several parts. Each student described the lab somewhat differently so that the following is a composite description. The faculty spoke about the following: respect for the cadavers, the cadaver as a gift which should be treated as such, and about potential problems some students might have. In discussing these things, the faculty communicated sensitivity and respect to the students. In addition, letters were read from people who had donated their
bodies or from their families, and a chaplain spoke and read a poem, published in Bertman and Marks's 1989 work, from someone who had donated her body:

        TO A MEDICAL STUDENT

        This is my body,
The shell of my being,
Which is given to you.
In final offering
To the world
I share the elements of life
From these old bones,
These ligaments,
My sinews and my nerves
May that life force
That ran in me
Shine forth once more
And pass to you
The knowledge and the power
That help sustain
The miracle of life.

In addition, a panel of second-year students spoke of their experiences in the anatomy lab the previous year. Five of the eight students spoke very positively about the panel. Ruth best explains:

        . . . they had a really good range of—of views, and they had a few people who, for a variety of different reasons had had real difficulties and kind of talked about how they had felt and why they had had problems . . . so they talked about how it had made them feel, and then they also talked about how the staff had addressed it and . . . helped them out, and for one, or maybe two of them, they had stopped going at a certain point in the year, and people had been really supportive of helping them learn anyway, so you just got the feeling that it was okay . . . even if for some reason you couldn’t deal with it, you weren’t going to be unable to pass anatomy because of it, and—and then they also had another . . . couple people who were just kind of “normal,” and who hadn’t had any, kind of, trauma or grand revelations, but who’d had a . . . just different, kind of natural feelings come up and talked about the different thoughts they’d had, and so you got a good spectrum of, like this doesn’t have to be a major crisis . . . that no matter what, you’re going to get something from it
... so it was a nice range of people, and--and it was just kind of reassuring about whatever the outcome, there would be some things that are hard about it, but, um, hopefully some things that... really make it worthwhile, and even if there aren't, you're not gonna... be in trouble because of it.

In contrast, although Sarah thought the other parts of the orientation were good, she viewed the panel as detrimental because she did not feel the views were balanced. She felt the experiences were all traumatic:

I thought that was good, talking about how we should respect the body, and then we had students come in to give us "their" experience, and it was all like, traumatic... like, "It scared me," or "I fainted," or "I went home crying," "I had nightmares," so at first I felt okay, and then I listened to them thinking, "Well, geez, well maybe I am going to have all of these reactions," and so I think that's kind of what stirred me up more than I normally would have been, and... it also made me think, what's wrong with me now that I'm not having any of these problems, so I don't think they really balanced it--I think I remember there was one person that said, you know, "I didn't have any problem, but I know people that did..."

As the final part of the orientation, the students were given the opportunity to go to the lab and see as much of the cadaver as desired. The cadavers were progressively exposed so that the further into the room the student went, the more the students could see.

... everything in lab was covered up so they said... "You can come up if you want to, you don't have to. You can wait 'till next week--whatever, but if you want to come up, you can do that, and just as you first go in, everything will be covered, and then if you want to go further in then eventually you'll see maybe part of a torso, and then if you move a little further back--if you want to go that far, then you can look at a hand, and if you want to go even further back..." So they had things sort of graded, um, for our comfort level.

As mentioned earlier, some students expressed reservations about the orientation. Kim wished there had been a follow-up to the orientation to get
"some sort of philosophical wrap-up." She also thought that the orientation intensified her fear because it made anatomy lab a reality; yet, she acknowledged that it gave the students more to discuss. Ruth echoed Kim’s statement about intensified fear, and said that the panel:

... kept building it up as something... a major experience and, I just had heard so much that that’s kind of... a rite of passage and milestone, and so it just... filtered up as something that was gonna to have some major impact on me, and I didn’t know what it was going to be--how I would react to it, but... I was kind of unsure.

Kathy was "really impressed with the orientation," but later in the interview questioned the intentions of the instructors and said that "they might give lip service to the orientation and everything, but really the complex issues are just not discussed and they just won’t be..." Overall, the students spoke positively about the orientation, especially the panel of second-year students. The positive statements were far more numerous than the negative ones, although I included almost all of the negative statements above.

For the students, the orientation was an important introduction to the anatomy lab and served several purposes. The instructors communicated the appropriate attitudes for the lab, namely respect and seriousness. In addition, the instructors created an environment where emotions were permitted. Similarly, the second-year panel contributed to this supportive environment by sharing their personal experiences from the previous year. Finally, the students were allowed to ease into the lab; to decide for themselves how much of the
cadaver they wished to see exposed. Overall, the students spoke very favorably about the orientation experience.

The Center for Health and Ministry

The Center provides independent counseling resources for the students at the medical school where the study was conducted. The students spoke positively about the chaplains from the Center who were involved in the anatomy lab in several ways. One chaplain spoke at the orientation for the anatomy lab, and chaplain trainees attended the anatomy lab throughout the course to serve as a resource for students interested in talking to them.

Students acknowledged the positive effect of the presence of the chaplains in lab, though most students admitted that nobody ever spoke to them. In the interviews, most often the students brought up the chaplains while answering related questions. Kathy said, "... they've had chaplains the whole way through which I think is wonderful ... it's wonderful to know that they're there, and reminds us all to be reverent and to be serious ..." Similarly, Rachel shared:

... every day there's somebody walking around who you could talk to if you need to. I've never seen anybody ever talk to them, actually, (laughs) but they're there. And to me their presence ... you know some people might say it's overkill, you know, and stuff. Who's gonna ... have a feeling at that moment they have to talk about, but to me, their presence reminds me of the value and the importance and significance of what we're doing ...

In spite of nobody ever talking to the chaplain trainees, their presence was viewed positively by the students.
Although the chaplains were appreciated, some of the same students felt that their expectations of the chaplains were unmet. Kim, for example, felt that “they kind of weren’t as much as a presence as I thought they might be,” even though she thought it was great that they were in the lab. Furthermore, she admitted that it was not going to be as wonderful as she had thought, partly because “you have to get so much work done . . . I think you tend to leave your issues...behind the first five minutes, and then just do it . . .” Finally, Kathy felt “sort of bad for the chaplains being there . . . because they don’t always have a role . . . but their presence is so meaningful to me, even if I don’t say a word to them.” In spite of these limitations, the students expressed positive feelings toward the chaplains. Even though few students actually spoke with them, the chaplains had a calming and reflective influence on the anatomy lab experience, more so than expected based on the level of interaction between the chaplains and the students.

*Evolution and God*

For some students, the anatomy lab and cadaver dissection had such a powerful impact that it forced them to question their view of the world. Specifically, they questioned the origins of life and the non-existence of a spiritual world. For example, Rachel clearly changed her view of the creation of the world, forcing her to question her previous belief in evolution. She gave the following answer when I asked about her positive experiences or thoughts about anatomy:
... I've always been pretty science-minded, and all that kind of stuff ... but when you see this—I don't believe in the theory of evolution any more. I just don't ... yeahhh ... maybe millennia ago we were just a bunch of chemicals in a soup, but something had to act to get us from there to here. I just don't think that it could be random ... adaptation to the environment to get us from that to this. It's just—I mean I can't look at anything going on in the human body and believe that anymore. So, to me, the awe of it has actually made me really start to ... try to come to understanding of my own spirituality. And I think that's good.

To think that dissection of the human body could be such as powerful experience as to change one's conception of the world and its origins! It is worth mentioning that Rachel was the student who found the lab exceedingly traumatic, yet she reflected positively on her questioning of her world view and subsequent attempt to understand her own spirituality.

Ruth, similarly, questioned the existence of God, expressing her ambivalence. Earlier in the interview she had commented that some students found the lab to be a "deeply spiritual experience for them," and she acknowledged that she had had similarly felt "moved" and "awe-inspired" by the body. I questioned her further about this spirituality that she had mentioned, asking her to elaborate.

She replied:

I just find it awe-inspiring seeing the ... intricacy of ... all the structures ... and just how—just unbelievably complicated and intricate it is, and ... it's not ... for me ... thinking that it was created by some higher being, but ... well, in a way, it makes me ... kind of more skeptical of ... how things could've evolved, and not been created because they—everything is so perfect, it just seems incredible that evolution could account for that—and...and I still ... I still don't believe in God, but in a way ... before I felt like it was, kind of, it didn't make sense to believe in God, and that was kind of this obvious thing people had invented to explain things, and—and now—it seems harder not to believe in God (laughs), because it just seems so hard to believe that things could have just spontaneously
arisen ... and work that well, and be that ... well-designed without a plan, and ... so that's kind of, um ... kind of amazing ...

Ruth was amazed by the complexity and intricacy of the human body to the point that dissection caused confusion in her ideas about the existence of God: she stated that the body made her more skeptical of evolution, and yet she admitted she still did not believe in God. Then she stated that it was harder for her not to believe in God. She clearly struggled with her concept of God as she spoke; the power of the anatomy lab was evident.

Sarah, on the other hand, did not change her ideas about God or evolution; however, she questioned her ideas about the spiritual world. She spoke of life after death in response to my question about her thoughts on her own death:

... so I've been wrestling with ... what is going to happen to me, where do I go, what is the right way to think, or whatever, so I think it does bring up the question more, like ... what has happened to this person's spirit ... where are they now, or are they anywhere, you know even when I saw that woman (in the morgue) that was newly dead ... and just wondering ... what is it about her ... that's not there and what's happened to it, and where's it gone, and kind of the same thing with me ... I think you realize, too, your ... own mortality ... when you're working on a dead body realizing, I'm going to be dead. This could be me laying on this table, so yeah ... I have thought about it more.

So the anatomy lab forced Sarah to think more about her own death, and to recognize her own mortality. In addition, the lab also brought up the question about the deceased person's spirit which she mentioned again when I asked her how it had been thinking about her own death more:

It's been confusing, because I'm ... confused about it anyway, and it seems like the more questions I ask, the more confused I become ... I'm pretty sure there's a spiritual world ... but at the same time, what does that mean, and so--I think because there isn't anything tangible for me, I
just kind of go in circles, and basically confuse myself more, so, like I've said, I've thought about it more, but it hasn't really answered anything (laughs) for me.

For Sarah, the lab created confusion about the existence and the meaning of a spiritual world.

These three women spoke movingly of the impact that the anatomy lab had on them. Specifically, the body with its complexities forced Rachel and Ruth to question their ideas about the origins of humans on earth. For Sarah, the dead bodies in both the lab and the morgue led her to think more about death and life after death. These experiences in the anatomy lab touch upon fundamental questions of human existence, questions which remain unanswered.
Chapter VI

Conclusion

In my study, I attempted to explore the experiences of eight first-year medical students in the gross anatomy laboratory. Although some literature exists on medical students and their cadavers, no in-depth interviews are available. The eight students I interviewed had profoundly different thoughts and feeling about the dissection of human cadavers, yet they all had much to share. Their wide-ranging attitudes ranged from dread and disgust to awe and amazement. A few students were nonchalant while others were traumatized. In general, the students' fantasies did not match reality; their expectations did not match the outcome.

Yet the lab became an arena for self-discovery. Some students discovered that they could handle lab, others discovered that they could but did not want to handle it. Some students further explored the concept of death while others saw no connection between death and cadavers. The most surprising self-discovery in my opinion, and perhaps for those for whom it was a self-revelation, was the revelation of unexpected and unsolicited thoughts about our existence, namely God, evolution, and an after-life.

The faculty play an important role in anatomy, as voiced by the students who praised the faculty for their open, caring attitudes. Since anatomy lab marks the beginning of the socialization of medical students, the faculty can teach students
compassionate behavior in the context of anatomy. The humanistic aspects of medicine can be taught concurrent with anatomy. Below is a proposed curriculum which integrates the art and science of medicine.

Proposed Curriculum

Based on both the review of the literature and the interviews, I propose a curriculum which integrates issues of death and dissection with the anatomy course while providing an opportunity to interact with physicians and living patients. The fundamentals of the course are, in part, based on the program of Bertman and Marks (1989) and include opportunities for small group discussion, exposure to the humanities as they relate to dissection, interaction with living patients, and contact with physicians who act as role models.

The physician-patient component of the course would consist of eight afternoons of seeing patients with a physician preceptor. This would ensure that the student’s first contact with patients would be with the living rather than the dead. In addition, the student would begin to learn about the doctor-patient relationship. Physicians preceptors would be chosen based on their excellent bedside manner. While seeing patients, students would be expected to relate the relevant anatomy to their gross anatomy course work.

Anticipating Dissection
The first activity would occur prior to the beginning of medical school. The students would “devise an image in word or drawing relating to their thoughts or feelings in anticipation of the experience of human dissection” as described by Bertman and Marks (1989, p. 105). The images would then be used in determining the content of the course and during the subsequent session called “Facing Dissection.”

Session 1: Orientation

Orientation would address the interrelationship of the art and science of medicine in addition to the “the professional limitation that results for suppression of one’s emotions in clinical practice” (Bertman & Marks, 1989, p. 106). This session would set the stage for acknowledging feelings toward death and dissection and would allow for a discussion of the students’ need to express or suppress emotions depending on the situation. By addressing their emotions and coping mechanisms, the students would realize that talking about such things can be a healthy aspect of professional and personal development.

The second part of the orientation session would include a panel of second- and third-year students talking about their thoughts, feelings, and experiences regarding anatomy. This panel must include a range of experiences to ensure that the students feel that their own reactions are within the normal range. Personal revelations from the instructor(s) would also be a crucial part of this session; students need to know that their instructors are “human,” too.
Finally, students would be given the opportunity to visit the lab, prior to dissection, either as part of a group or individually. The students would be allowed to learn about the cadavers, as permitted by law, for example, their first name, their religion, and their marital status. This information could instill respect for the cadavers by reminding the students that the cadavers were formerly living.

Session 2: Literature and Film

The first hour of this session would include a discussion of works of fiction and essays regarding responses to the dead body. The integration of art and medicine in addition to the theme of mortality would be explored though this literature. Bertman and Marks (1989) have a resource list from which to draw for this session. In addition, the students' own works from the "Anticipating Dissection" activity would be discussed.

The second hour would begin with a showing of the film, "How Could I Not Be Among You?" as references in Bertman and Marks (1985). Small group discussions would follow led by faculty chosen for their caring and compassion.

Session 3: Grief

This session would be led by Stephen McPhee, an internist at U.C.S.F., who led a similar discussion for Health and Medical Sciences 298, A Course on Death, in the spring of 1995. Students would be asked to read C.S. Lewis's A Grief
Observed beforehand. The session would have to goals: it would provide an opportunity to talk about death and grief, and it would provide a role model of a compassionate physician who is both comfortable discussing this subject and able to integrate it into his life and medical practice.

Session 4: Dying at Home

Yvonne Rand, a Zen Priest with considerable experience in attending people who are dying, would discuss her experiences. In addition, she would teach the students some practical exercises to use with people who are dying.

Session 5: Silver Lake Life: A View From Here

Students would watch this documentary of a man dying of AIDS and then would discuss it afterward. The viewing of this film would be a continuation of the session on Dying at Home and would provide an opportunity to see the dying process and its effects on those left behind. Small group discussions would be led by the same faculty in session two.

Session 6: Poetry

To continue to integrate the humanities into medicine, Wendy Lesser, editor and publisher of The Threepenny Review, would read poetry on death and lead a discussion. Students would be encouraged to share their own poetry on death or anatomy.
Session 7: A Most Memorable Image

This session, as described by Bertman and Marks (1989, p. 108), would be a discussion of the students' commentary on a memorable image from the dissection course, from either the lab or the above course. Bertman and Marks (1989) found that the exercise allowed the students to examine and interpret their own images which proved to be valuable for the students.

Session 8: Memorial Service

The faculty and students would organize a memorial service to be held after the anatomy final exam. The service would provide the opportunity to express gratitude to those who donated their bodies in addition to providing a sense of closure. Schotzinger and Best (1987-1988) wrote an article on the importance of the memorial service for medical students. They found the service to have several useful functions:

Memories of the service as well as of the dissection serve to anchor the adjustment to death, provide a salient endpoint for the cadaver experience, distinguish the cadaver with an identity, and connect the deceased to the living. In summary, closure is a crucial element in resolving painful experiences which are difficult to articulate (p. 226).

This proposed concurrent curriculum would provide the students with the following: opportunities to discuss their thoughts and feelings, compassionate role models, a sense of the interrelationship of art and medicine, and continuing
contact with living patients. This curriculum would begin the socialization process of the students in a positive way, acknowledging the human dimension of medicine, both through interactions with patients and physicians and by examining their reflections throughout the process. The socialization process begins with the first day of anatomy. Thus it is crucial to provide a foundation to train caring and compassionate physicians while exploring the humanistic aspects of medicine. As Bertman and Marks note, "When discovery and self-discovery coexist in medical education a firm foundation is laid for both art and science and for the insurance of our continuing humanity" (1989, p. 111).

Have you ever wondered how long in your dealings with patients it took you to get over the fact that your first patient was a cadaver? It is commonly known that medical students dissect the bodies of the dead; it is less commonly realized that these same dead do a great deal of cutting, probing, and pulling at the minds of their youthful dissectors...3

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References


