The Humanities and Gross Anatomy: Forgotten Alternatives

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ABSTRACT: Researchers in medical education have extensively studied negative reactions to gross anatomy, sometimes grouped under the term “the cadaver experience.” Although there has been disagreement about the extent and importance of such phenomena, several attempts at curricular reform have been designed to “humanize” the student-cadaver encounter. However, some obvious sources linking gross anatomy and the humanities have been consistently overlooked. Such sources—from the history of art, the history of anatomy, and autobiographical and imaginative literature—not only bear witness to the “cadaver experience” for anatomists of the past, but also offer forgotten alternatives for placing present-day reactions in perspective. Former methods of teaching which used such material might serve as models for reintegrating the humanities into the study of gross anatomy as a possible humanizing force.

THE CADAVER EXPERIENCE

Medical educators, sociologists, and behavioral scientists have all concerned themselves with the possible stresses and side effects of anatomical dissection. Some have found significant negative reactions accompanying the experience, from feelings of being threatened to “profound emotional shock.” Others have been concerned with the long-term consequences of the emotional defenses used by students to cope with dissection: distancing or detachment which may lead to impersonal patient care; a “dehumanized” attitude toward the body; or maladaptive attitudes toward death and dying in subsequent practice.1,2,3 On the other side of the coin, numerous studies have shown that students rate the stress of anatomical dissection fairly low among their concerns, that few

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students faint or manifest overt reactions, and that adjustment to the anatomy lab is usually rapid.4,5,6 There may have been methodological problems with the studies which found no problems with the cadaver experience.7 Nevertheless, no consensus has emerged about the existence of the phenomena grouped together as the cadaver experience, much less about curricular reforms which might be designed to address the issue.

Some reforms have occurred anyway. Among medical schools which have attempted innovative ways of introducing the undergraduate anatomy course, experiments differ in the amount of curricular time allotted, the timing of their occurrence, and the specific approaches used. They are similar in drawing heavily from approaches common to the behavioral sciences and focusing on students' personal reactions and feelings, especially with regard to death. Reports of student reaction to or evaluation of such innovations vary from quite positive to strongly negative.8,9,10

There is a rich body of historical and aesthetic material on anatomical dissection. In the past, medical educators made use of history and art related to anatomy. For example, William Williams Keen, a surgeon and lecturer at the Philadelphia School of Anatomy, introduced his annual course of lectures with an address on the early history of practical anatomy. So popular was this introduction with students that one class published the lecture in 1870.11 Regrettably, such possibilities for linking anatomy and the humanities are frequently overlooked by contemporary educators. Medical students have been cut off from a past they regard as distant and irrelevant, instead of feeling themselves to be part of the long tradition of physicians and scientists who have dissected.

In addition to offering perspective and a sense of tradition with respect to gross anatomy, sources from the humanities may be used to hypothesize about the cadaver experience of previous dissectors. The Vesalian illustrations of Calcar, set against the background of the Italian landscape, suggest an imaginative leap between inert anatomical material and formerly living human beings.12 Stories of nineteenth-century grave-robbing can be analyzed for traces of ambivalence about the activity in some of its participant students. Poems by physicians such as John Stone and Gottfried Benn depict aesthetic and intellectual juxtapositions between life and death which occurred in their minds and perhaps in those of many others who have previously learned anatomy. These approaches have the advantage of addressing students' anxieties at slight distance, without having to focus attention too intensely on the