



## Anatomists' perspective on boosting bioethics in medical education

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### Abstract

The last few decades have witnessed the emergence of the field of bioethics and its incorporation into the fabric of medical education. Students entering medical college face unique challenges and ethically charged situations. Cadaveric dissection is one such activity that carries ethical uncertainties in it. Studies have shown that an appropriate orientation towards the values inherent in a doctor's relationship with patients, colleagues, and society might help medical students in learning how to navigate ethical dilemmas that they face. The aim of this article is to examine the feasibility of incorporating ethics teaching in preclinical anatomy education, and to emphasize the crucial role of professional identity in shaping the inner image of the "to-be" physician. We also discuss the ways by which professional identity can be emphasized right from the first year of medical school. Such endeavors may help learners in finding ways to respond ethically in their professional life. Understanding the role of bioethics in anatomy education with regard to professional identity formation can help guide policy makers and medical educationists.

**Keywords:** Anatomy; Cadaver; Cadaver ceremonies; Ethics; Professional identity; Professionalism.

### Introduction

In the previous century, anatomical education was regarded as noble and humanitarian and medical students had a special privilege which was not available

to the lay public. Now, however, owing to scarcity of cadavers and with reduction in the time available for dissection, the 'professional identity' of anatomy has started to wane.[1] It has been posited that anatomy prepares one for later,

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when one actually begins to deal with patients.[2] From a humanist perspective, anatomical education can be said to guide students to appreciate their roles and responsibilities relative to others, establish moral values, and create meaning from experiences - these are essential prerequisites for future physicians.[3,4] In addition, separating the body into parts can contribute to an understanding of the sense of the death, while dismantling the body can play a part in the taming of death.[5] An ethical anatomical education should, thus, not only help the students focus on the anatomical structures, but also make them think about the human being to whom the body once belonged.[6] In a utopian sense, the curriculum of anatomy can be broadened to provide insights into the emotions towards disease, death and dying.[7] The aim of this article is to examine feasible ways in which ethics teaching can be incorporated into preclinical anatomy education with a particular emphasis on professional identity formation.

### Professional Identity

The society in which we live demands certain core attributes (such as competence, compassion, honesty and integrity) in a physician.[8] A critical element of medical education is to foster the formation of a professional identity that encompasses these core attributes and which become an integral part of the identity of learners.[8] Professionalism, being intrinsically related to the social responsibility of the medical profession, can be defined as a set of innate behaviours and responses to contextual phenomena. They are based upon individual cognitive or personality dimensions gained over the course of learning and practice and vary even within the same individual because humanistic elements of medicine are considered complex and uncertain.[9,10]

In today's context, training in and assessment of professional values is necessary to ensure that medicine does not become a 'trade'. [11]

### Promoting Professional Identity formation in medical education

The explicit teaching of professionalism coupled with outlining the process of professional identity formation has been found to help students develop their own professional identity in collaboration with role models and mentors.[12,13] The process involves a number of transitions with the learner moving from a self-centered perspective to one where the expectations of others are selflessly fulfilled so that society's needs are served.[13]

Professional identities can be developed by effective interaction with other members of the medical profession and with peers and seniors who demonstrate role-appropriate behaviours.[14] Identity formation can occur at two levels: psychologically, at the individual level; and through socialization of persons into appropriate roles.[15] Upon entering medical college, incoming students socialize to develop the identity of a medical student. Thereafter, upon proceeding to the clinical part of the course, their multiple professional identities intersect and they develop a mix of the identities which is modulated by the discipline they opt for.[8,15]. At this stage, self-reflection and patient interactions play an important role in professional identity development.[16,17]

For some, development of professional identity is not easy, as their personal identities remain divergent from their new professional role (identity dissonance).[18] These students, if not mentored in the right way, may develop haphazard coping mechanisms such as dropping out from medical school or

inappropriate dressing. The medical profession demands team work and inter-professional interactions. Complexity in these established identities manifests as varied communicative patterns in these settings. For example, a doctor who considers himself belonging to a dominant group and maintains that hierarchy in his professional groups, may tend to compartmentalize the team and consider others as out-groups. This might be detrimental not only to the team, but can also unconsciously affect the doctor's feeling of affiliation towards his patients.[19]

The discrepancy between the existing personal identity of a student and the desired professional identity may induce stress in some learners. This stress can be mitigated if medical educators emphasize the satisfaction of becoming a physician and encourage the socialization process.[15,20] Considering professional lapses as a part of the learning process, safe learning experiences must be provided that will ensure that 'to be' physicians can identify and correct lapses so as to foster their professional growth.[21]

### Promoting Professional Identity formation during the anatomy course

The dissection hall is a supportive learning environment where students work in groups. In doing so they benefit from collaborative learning and develop team building skills. Effective role modelling and mentoring can potentially take place in this environment because the demonstrator knows the students personally, can monitor their progress, can share significant events in their medical career and use them to inculcate professionalism skills in novice learners. Such ad hoc, interpersonal transmission of information between experienced teachers and debutante students are important

elements of the 'informal curriculum'.[22]

Since the cadaver is the first "body" upon which students lay their hands, establishing the student-cadaver relationship may serve as a simulation for the doctor-patient relationship of the future. In western countries, the cadaver is bestowed with additional personal qualities and is regarded as the student's "first patient".[23] In contrast, medical schools in Thailand confer the status of "ajarn yai" (meaning 'great teacher') on cadavers.[24] The Thai approach places the medical student in the already familiar role of "student" rather than in the potentially intimidating role of a "doctor".[25]

Cadavers have an important role in ethics education.[26] A model of "detached concern" has been described regarding the emotionality of a student in the dissection hall.[27] During the first exposure to a cadaver, the student may feel certain emotions (concern) that tend to diminish over time until a degree of detachment develops. This detached concern, similar to that seen in clinical years during patient interactions, is essential if the student is to learn without getting emotionally overwhelmed by the human aspect of the cadaver. In the course of the dissection, most students latently adopt a perspective switch between the concept of the cadaver as a learning tool (rational aspect) and of it as a human being (sensitive aspect).[28]

As dissection brings students in contact with the deceased in the early part of their careers, this encounter can be used as a foundation for the exploration of humanistic goals of medical education.[29] Undertaking an oath prior to cadaveric dissection is one of the ways to ensure that medical students fulfil their duties in a professional manner regardless of personal feelings or emotions.[30] Cadaver

ceremonies, by encouraging student reflections, have reaffirmed the discipline of anatomy as a profoundly humane enterprise.

In our institution, we have incorporated the cadaver disrobing program whereby we ask the students to reflect on their emotions upon gradual exposure to the cadaver for the first time. Similarly, at the end of the dissection course, we have a gratitude ceremony, whereby students offer the last rites to the disintegrated cadaver. The entire phenomenological qualitative analyses of the students' responses upon the first exposure to a cadaver has been described elsewhere and can be classified into four cardinal types of responses.[31] The process may induce affective responses (pity, respect), cognitive ones (speculating on cuts, callouses or sutures on the body), behavioural (demonstrating fear) and moral responses (gratitude, sacrifice). The reflections of the students during the gratitude ceremony demonstrated their commitment to honor the cadaver's role

in their learning, with some being inspired to become good doctors and others committing to take up the practice of surgery.[31]

### The role of the institution - 'ritualizing' professional identity

As identities are constructed from within, institutions play a crucial role in shaping the identity held by the students within specific practices [32]. Transition from one identity to another can be marked by a "rite of passage" ceremony such as the ones described in the preceding paragraph. The role of ceremonies in professional identity formation is depicted in Figure-1. Students entering medical college have their own presumptions which determines their personal identities. They undergo the natural process of socialization which determines their professional identities. The ceremonies and ritualization along with the hidden curriculum helps in sharpening the desired professional identity.

Institutions worldwide already conduct

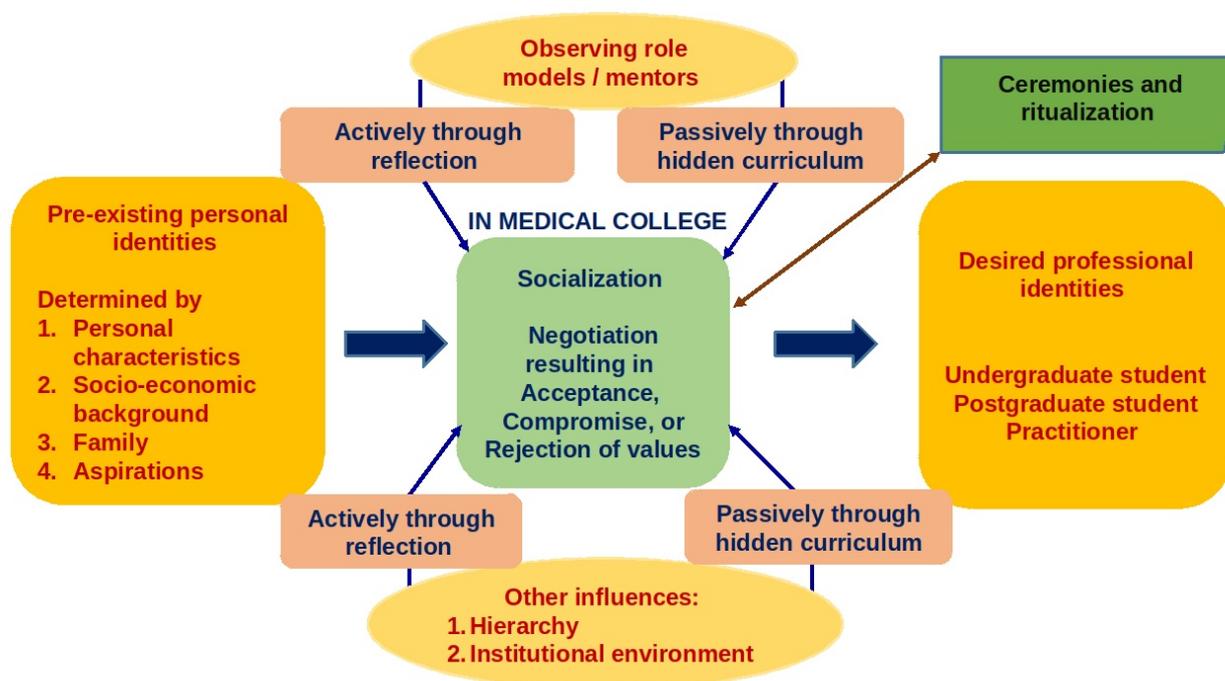


Figure 1  
The practicum of professional identity formation.  
Adapted from Cruess RL, et al (2015)[12]

white coat ceremonies, oath ceremonies and stethoscope ceremonies to mark transitions along the journey to becoming a professional.[33-35] Cadaver ceremonies, too, can be ritualistically conducted for incoming medical students to help them cherish the privilege of dissection which is not available to other professionals. They may also serve as a powerful means to define the atmosphere and provide an ethical framework around dissection.[24] Portfolios can be used to assess the transformative learning as a result of these ceremonies. These portfolios can help learners reflect on the lived experiences (like their first sight of the cadaver) and they may benefit from considering how the process informs their attitudes and behavior as future physicians. If competence helps a student in "doing", then identity formation helps him or her in "being" like a

physician.[36]

## Conclusion

The evidence in the literature as well as our own experience with cadaver ceremonies suggests that the dissection hall is eminently suited to the incorporation of ethics training. To address the area of professional identity formation, and to ensure character development and analytic skills for ethical and humanistic dilemmas, each institution should try to develop a program that embraces all phases of education, encourages reflection, and starts right after admission to the course. The transformation of learners' epistemologies over time and under different situations can be aided by rite-of-passage ceremonies that are known to boost professional identity formation.

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