

When the dead teach

Exploring the postvital life of cadavers
in Danish dissection labs

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Abstract

This article follows the postvital lives of bodies donated to science, exploring their continuing material and social lives after the donor has died. I explore how the postmortem wishes of those who decide to donate their bodies to science intersect with the pedagogical aims of anatomical dissection. Using ethnographic fieldwork in three dissection labs in Denmark, I attend to the encounter between medical cadavers and medical students, asking how this encounter unfolds and what kind of enduring effects it might have. This is done through two steps. First I pay attention to the unresolvable ambiguity of medical cadavers, detailing three dimensions of ambiguity that have significant implications for the encounter between cadaver and student. Second I describe how medical students engage with this ambiguity, attempting to strike a balance between the inherent violence of dissection and the respect for the deceased that they are told to maintain. On the basis of this ethnographic attention to the rhythms and negotiations of the dissection lab, I argue that we may understand what goes on in dissection labs as a kind of ethics training in practice, where students are given a chance by donors to learn how to deal with the uncertainty and ambiguity that will characterize their future engagements with human bodies, life, and death.

Keywords

anatomy, ambiguity, death, dissection, ethics, postvitality, pedagogy

Introduction

Each year, a number of Danish citizens who die voluntarily go on a detour before arriving at their final resting place, as they are put to use within medical research and training, especially in gross anatomy courses for medical students. These dead bodies carry on a sort of continuing liminal existence after death, what I term ‘postvital life’. I am inspired by the term ‘postvital living’, coined by Richard Doyle (2003), but use the word for my own purposes, to refer to instances where human bodily material lives on after the person dies and thereby carries with it traces of this person into new social arenas, affecting the lives of those who engage with it. My aim in this article is to explore how the postmortem wishes of those who decide to donate their bodies to science intersect with the pedagogical aims of anatomical dissection. What kind of enduring effects might the encounter between medical students and bodies of donors have? I take seriously the ambiguous state of the cadaver as, on the one hand, a pedagogical resource that seems ‘deader than dead’ and, on the other, a continued existence that retains a kind of agency stemming both from the intentionality of donation and from the latent personhood and lived life that the cadaver embodies. Through demonstrating how students engage with the ambiguous nature of anatomical cadavers and the obligation to treat them with respect whilst having to dissect them, I argue that experiences in the dissection lab have the potential of instilling a certain grounded moral horizon in students, which may have enduring effects on the ways they come to relate to and treat the bodies of future patients.

Whilst the present volume features the words ‘new immortalities’ in its title, the practice that I have been studying cannot claim to be novel. Indeed, for hundreds of years, cadavers have been used in the medical world in Denmark and elsewhere, as resources for research, education, and training (Persaud, Loukas, and Tubbs 2014). Including an ‘old’ practice in a volume about ‘new’ immortalities alerts us to two things. First, it underscores that practices, as well as the conditions that shape them, change over time. For instance, today bodies are supplied through voluntary donation in most European countries (McHanwell et al. 2008; Riederer et al. 2012) including Denmark, whereas they used to be supplied through governmental appropriation of bodies from criminals and the poor or via extralegal ways of procuring cadavers, such as grave robbery (Richardson 2000; Sappol 2002; Buklijas 2008; Nystrom 2014; Olejaz Tellerup 2013). These changes in supply are interesting as they tell us something about the intersections of the medical use of cadaveric material, ways of understanding corporeal afterlife, and the practising of rituals and values related to the management of the dead. Although anatomical dissection is an old practice we should not dismiss it as a site where newer forms of values surrounding the meaning and memorialization of the dead are being interwoven with biomedical practices. Second, how these engagements between donors’ cadavers and medical students take place is always new in the sense that they are continually made and remade in practice. In this sense, the effects of postvital living are always ‘new’.

Going into the lab

In Denmark the bodies used in the dissection lab are obtained solely through donation. To bequeath your body to the anatomical institute you must be over eighteen years of age and a Danish citizen. People who wish to donate their bodies to science must contact the university to which they wish to donate. I take up only the pedagogical use of cadavers in this article, but donated bodies may also be used for research. Through 2013 and 2014, I conducted ethnographic fieldwork at the three medical schools in Denmark that have donation programs, located in the cities of Copenhagen, Aarhus, and Odense. During fieldwork I conducted participant-observation in three anatomical dissection courses (one each at the three different schools) and at two postgraduate surgical training courses, one on surgical entryways and one on knee arthroscopy (see Olejaz 2015 for more details on methods). The procedures for donation as well as for handling the bodies before, during, and after use differ slightly among the three schools but are largely similar. Due to confidentiality issues I do not distinguish among the three schools in this article. My main focus point is on the medical students; my observations from surgical courses work more as a contrasting device, highlighting the particularities of the postvital lives of bodies used in anatomical dissection courses.

While in the labs, I observed and took notes; spoke to students, instructors, and surgeons; and once tried dissecting out for myself, though tentatively and only for a few short minutes. Much of the fieldwork also took place outside the lab itself, as I chatted with students during breaks or followed instructors into their break rooms where I had coffee and cake with them and discussed my project. In addition to being in and around the dissection labs and speaking to the three leaders of the anatomical dissection programs at each school as well as instructors and students, I carried out in-depth interviews with three members of staff and three students. Here I had the opportunity to ask them in more detail about the practices I had observed. In the following, I take you through the encounters between cadavers and students, paying close attention to how the postvital lives of cadavers unfold. I do this through first attending to the ambiguity of cadavers and then describing how students attempt to work with these ambiguities in ways that may have lasting effects on their future clinical work life.

The ambiguity of postvital cadavers

When medical students enter the dissection lab, they encounter a strange and ambiguous figure: the anatomical cadaver. It may be argued that all dead bodies and human remains, also historically, can be understood as ambiguous in some sense of the word (Kragh 2003; Kristeva 1982; Bynum 1995). What I focus on here, however, are three specific but overlapping dimensions of ambiguity that the anatomical cadavers in dissection labs embody: they are between the dead and the living, persons and objects, the universal and the particular.

Creating anatomical cadavers: Extending liminality

In Denmark, the donation of the cadaver to science is the only legally acceptable exception to the general rule that the body must be buried or cremated upon death (Herrmann 2016). When a donor dies, the undertaker takes the body to the medical school where the deceased had registered as a donor. It is crucial that the school acquires the body quickly (within four days at the most) in order for the body to be in a state where it can be used. Universities may keep the bodies for up to two years and sometimes retain parts of the body indefinitely for making preservations. As such, the decision to donate interferes with regular forms of disposal as well as customary rituals surrounding dead bodies in Denmark (Rubow 1993). Drawing on theories of rites of passage (van Gennep [1909] 1960; Turner 1967), anatomical cadavers can be seen as liminal beings; they exist in a kind of social and cultural limbo, separated from the realm of the living but not disposed of in the way society usually does with dead bodies. Whilst dead bodies may be liminal to begin with, anatomical cadavers thus exist in a kind of extended liminality. This liminality positions the anatomical cadaver as unclassifiable, as an entity that 'is neither this nor that, and yet is both' (Turner 1967, 99), and the fact that its liminality is extended renders traditional rituals to deal with liminality obsolete.

Arriving at the medical school, the donated bodies are removed from their caskets. At this moment their disentanglement from the specific individual begins. They in effect cease to be somebody's dead loved one and become anonymous; their conversion into a resource begins. However, at one of the medical schools, when I was shown around, we came upon a room in the basement inhabited by rows of empty white caskets waiting for their rightful owners to return. The professor showing me around told me that the caskets are marked in order to ensure that the bodily remains are returned to the casket they arrived in. The waiting caskets in the basement speak to the fact that the conversion will never be complete; it is in a sense temporary, only a detour, an extension of the liminal period. The waiting caskets further suggest that dissection is not (yet) an adequate way of handling dead bodies in society (although interviews with donors suggest that some of them may feel so, see Olejaz and Hoeyer 2016); after dissection the bodies are not just disposed of by the anatomical departments but are picked up by undertakers who engage in more traditional ways of disposing of dead bodies.

As the bodies are to be tools for learning and as they are to be cut open by hands that may slip and injure themselves, the bodies are now perceived also as potential health risks and are thus tested for various diseases, amongst other things HIV as well as hepatitis B and C. The outcomes of these tests decide the bodies' fates, potentially stopping short their postvital lives. For example bodies infected with HIV or hepatitis C cannot be used. Bodies infected with hepatitis B can only be used in surgical courses, as surgical residents are vaccinated. All bodies that are accepted are then shaven, giving them all a decidedly androgynous look. The bodies

that are to be used in the anatomical dissection courses for the medical students have formalin injected into their veins and are bathed in formalin before being washed through with surgical spirits. This process takes up to a year. The bodies for the surgical courses are frozen and then thawed before they are to be used. They are usually not kept more than six months. The freezing method keeps the skin and flesh fresher and more like the living patients that surgical residents will encounter and on whom they will perform the surgical techniques that they rehearse in the lab. Often the bodies reserved for surgical courses are cut into different pieces so they can be used for more than one course; surgeons practising for instance knee arthroscopy are only given a leg and not an entire body. Some bodies are also cut into pieces that are to be prepared into wet, dry, or plastinated anatomical specimens, thus preserved for years to come. Hundreds of medical students will see and learn from them, practicing their Latin for hours on end. These material remnants of human lives carry on their own social lives well beyond death.

All these different procedures entail a conversion from an individual dead person to an anatomical cadaver. However, the different preparation techniques used yield very different types of cadavers. How different they turn out can be seen in the following field note highlighting one of my own reactions. I had just arrived at the dissection lab where I was to observe a surgical course in different surgical entryways, using whole bodies. This took place some weeks after I had observed the first anatomical dissection courses for the medical students.

I am shocked as I look at the dead body lying on the steel table. He looks like dead bodies I have seen elsewhere and not like the bodies I have encountered with the medical students. This old man lying in front of me has a close to normal skin colour and I can see what looks like his veins under his skin. The bodies prepared for the medical students look different. Their skin is a little yellow and looks a bit waxy and swollen. When one of the surgical residents makes the first cut into the arm I flinch a little, half expecting the body on the table to do the same.¹

My reaction to this body, which the surgical residents agreed looked much more like a living body than the bodies they encountered in earlier dissection courses, made it clear to me that freezing the bodies did not disentangle them from the realm of the living as effectively as treating them with chemicals. A medical student, who had formerly worked as a medical secretary and had encountered dead bodies before, remarked dryly that chemically treated

¹ All field note entries were initially written in Danish. The excerpts that appear in this article were translated by the author into English and have been slightly edited for ease of reading.

bodies were ‘more user-friendly’ because they did not resemble people as much. Tied to the extended liminality of the anatomical cadaver is thus also an ambiguity that rests on the dual state of the cadaver as both a deceased person and a medical-pedagogical resource or object.

Anatomical cadavers as people and resources

As Helen Lambert and Maryon McDonald (2009) remind us, bodies are always social, also when they are part of medical and scientific practices. As such we might expect to find ‘shifts of meaning between bodies and bodily materials as physical matter and as social beings’ when we look at bodies being utilized within the medical realm (Lambert and McDonald 2009, 7). The anatomical cadaver is perched between object and subject, not fully a person anymore but not mere fleshy materiality either. It is both person and thing, object and subject. Much like Mette Svendsen (2011) has argued in instances of embryo donation, traces of the former identity of donated human bodily material remain and those who donate it as well as those who work with it negotiate the material as both biographical life and as biological resource, attending to what has also been called the ‘intrinsic’ and the ‘instrumental’ value of the material (Jones and Whitaker 2009, 36). In the lab, cadavers may be disentangled from personhood but they are also re-entangled in new webs of meaning, positioning them as strange figures that fail to rest comfortably in either the domain of things or people.

On the surface of it, there may not be much room for seeing the person in the dissection lab where bodies are understood and enacted as tendons, muscles, fat, and nerves. However, I observed in the lab a multitude of moments, some very evident and others going almost unnoticed, where it was obvious that the students perceived or enacted the subjecthood or personhood of the body in front of them. Other scholars have remarked upon this as well, amongst them Rachel Prentice (2013; see also Hafferty 1991; Fountain 2014). In her insightful ethnography of anatomy and surgery education in the United States, she writes of the ontological duality of the cadaver and argues that students engage in what she calls ‘tactical objectification, the ability to objectify the body or call forth the person as needed’ (Prentice 2013, 35). In line with her argument, I noticed a continuous oscillation between thinking about and enacting the cadavers as objects and as people. I am however a bit careful with the use of the word ‘tactical’, as this could imply a strategic cognitive action and thereby place all agency on the medical students. What is evident in the lab, however, is that cadavers have a sort of ‘latent personhood’ (Hallam, this volume), and that there are instances where markers of this personhood push through, making objectification impossible. There are also moments when the specific enactment of personhood happens, where the person is called forth. However, to talk, as Prentice (2013, 68) does, about ‘switching’ may be a little too neat. ‘Switching’ implies the existence of two definite states: things and people. But it is not necessarily the case that cadavers are sometimes just like bicycles and sofas and at other times just like my neighbour

or my mother. Rather they inhabit a space of their own where they balance on an impossible scale and cannot be characterized as either-or but rather as simultaneously-both. They are, as Annemarie Mol (2002) would have it, multiple: more than one but less than many. In some instances, as described in the next section, the balance may be said to tip towards personhood because the latent personhood of the cadaver pushes through; in others, the students call the person forth more deliberately, as I recount in the section on 'dissecting respectfully'.

Because the bodies are all shaven and because they are often swollen due to the chemicals, it can be difficult to establish the anatomical sex of the cadavers without looking directly at their faces, chests, or genitalia. Still, I never heard instructors or students refer to a cadaver as 'it', but always 'him' or 'her', in this way seemingly inferring the gender of the donor from the anatomical sex observed on the cadaver. A few times I observed someone call the cadaver by the wrong pronoun. This was quickly corrected by the other students. Reducing cadavers to genderless objects was apparently going too far. Even when holding a prosected specimen such as a leg, the students would often infer the gender by, for example, noticing the size of the specimen or the amount of hair growth. However, it was clear that smaller parts of bodies generally invoked the person less than the entire body (see also Sanner 1997; Prentice 2013).

Students also took note of the age of the cadavers. Most of the cadavers in dissection lab come from relatively old people. In one of the dissection courses I participated in, one of the cadavers was not as old as the others. This led to much speculation on the part of both students and instructors who wondered openly who she was, why she had died, and why she had wanted to donate her body. Some of the students discussed whether she had no family or did not want to be a burden to her bereaved. Her age made her stand out from the other cadavers, perhaps granting her more personhood. The fact that she was closer to the age of the students and instructors perhaps also made them see this particular body as an individual person and prompted more speculation on her life story. As medical doctor Christine Montross (2007, 13) writes, reflecting on her own experiences in the dissection lab: 'Here is what I will learn: The most alarming moments of anatomy are not the bizarre, the unknown. They are the familiar'. As such, moments when the distance between cadaver and student is somehow breached by shared fleshy materiality or when the traits of a cadaver remind people of themselves or a dear loved one stand out. The latent personhood of the cadaver thus not only reminds the students that the cadaver was once a sentient being, it also reminds them of their common materiality.

Other markers of life that invoke the person are things like tattoos and nail polish. As one medical student remarked while glancing at the bright red nail polish on the toenails of the cadaver next to her: 'She is still wearing nail polish, this one. Then you take your personality with you into the grave'. Notice how personality is here related not to something 'fleshy' but

to something that points to active choices and actions. The deceased with the nail polish had, at some point pretty close to her death, decided to paint or have her toenails painted. The visual remnant of this active choice seems to grant the cadaver personhood because it reminds us of her former autonomy.

Specific body parts, namely the head and genitalia, also conjure up individual life. These parts are covered in cloth whenever they are not in the process of being dissected or examined. On one of the last days of one of the dissection courses, I approached a medical student whom I had talked to several times. She was working on removing the dura mater from the brain, cleaning all the creases. I asked her how it was to be doing this, and she replied, 'It is more difficult to abstract from the fact that this is a human being. And I don't know if it is today or tomorrow, where we have to work on the eye', she pauses, 'There it comes close that this is a human being. But the other [points down the body] – there it is just looking for muscle-this-and-that, but [up] here it becomes difficult'. Notice how the student is not calling forth the person deliberately but still cannot forget the personhood of the cadaver in front of her. Consider also the following field note from a surgical course for knee arthroscopy, during which I spoke to two surgical residents about the differences between working on different parts of the body:

They have spent the day practicing on a leg from a cadaver, which has been severed above the knee and is fastened to the steel table with screw clamps. The man compares this with the dissection course saying, 'This is something completely different. It is nothing with a just a leg. It is the hands and the face –'. His female colleague adds, 'Yes, a hand with nail polish'. The man pauses from the work and looks up at me, then says: 'The best part about dissection was actually covering the body up again'.

What we see here is that both the entirety of the dead body as well as certain parts of the body make working more difficult, more uneasy. It makes it more difficult to forget that the cadaver was once a living person; full objectification is not possible to sustain in the lab. The ambiguity of the anatomical cadaver is not resolvable.

Epistemological balancing: Between universalism and particularity

The ambiguity of the anatomical cadaver comes not only from its liminal state and its uneasy existence between object and person. It also stems from its relation to other bodies and its intended use as a pedagogical tool that is supposed to be a real-life model of standard human anatomy but simultaneously is used as a way to demonstrate the wide variety of what real people actually look like on the inside.

In the dissection lab, cadavers are not the only representations of the human body present. Other representations include anatomical atlases, skeletons, prosected specimens, staff, and students. As the students dissect, they constantly move back and forth between the anatomical drawings in their books and the fleshy cadavers in front of them, comparing the two and even invoking their own bodies, flexing joints, feeling muscles move, and tracing the curvature of a bone through their own skin. Throughout the day they are called up in groups to draw specific structures on a blackboard, turning their messy 3D experience into neat 2D chalk lines. Here, bodies are pedagogical tools, whether they are neatly coloured drawings on the glossy pages of a book, dead and opened cadavers, or their own breathing, living bodies. They are, however, very different renderings of bodies (see McDonald 2014, 2015; Fountain 2014 for helpful discussions of some of the characteristics of these different bodies and the relations among them). As the following field note illustrates, the different renderings of bodies do not always neatly cohere:

The student is sitting on a stool, gloves on and arched back. She is in the middle of dissecting the bottom of one of the feet of the cadaver she is working on. She has asked me to hold up the anatomical atlas for her, because my hands are clean, so I stand there holding the quite heavy book. As I peer over the top I can see her working and she becomes increasingly flustered and frustrated as she looks from the foot in front of her to the picture in the atlas. I ask her ‘What is wrong?’ and she throws her hands into the air and sighs, then says, ‘It looks nothing like in the book! It doesn’t look like it’s supposed to’. She calls two other students over and then an instructor and they all stand there looking from book to cadaver, until finally the instructor takes the scalpel and sits down next to the student. In a few moments he has cleared away some material, which he deposits in a bucket, thereby revealing structures that look more like those in the book. As he gets up and gives back the scalpel he smiles and says, ‘Don’t worry about it, it takes practice’.

As the instructor says, it takes practice; it takes work to make the medical cadavers look like ‘they are supposed to’. Their anatomical objectification is not complete upon their entrance into the lab. Rather they are shaped continually and in dialogue with other renderings of bodies. Through this shaping, the students themselves are shaped and thereby learn (see also Fountain 2014). The above field note might give the impression that the anatomical atlas is understood as the truer version of the anatomical cadaver. However, one of the goals of the course in anatomical dissection is also to expose the students to anatomical variety and thereby show them that there is no one universal human body. As an instructor told me on my first day, as he was highlighting what he thought were important lessons from the lab: ‘Here the students learn that the body in the atlas doesn’t exist. They are just models. Real bodies come in all shapes and sizes and are filled with abnormalities’. As such, a certain ambiguity between

universalism and particularity is at stake here, where multiple versions of bodies collide. On the one hand, cadavers hold a certain degree of authority because of their fleshy and particular ‘realness’, but on the other hand, they are troublesome when they are too particular, when they divert too much from an imagined universal norm.

In these sections we have seen how the cadaver is experienced as an ambiguous entity. The ambiguity of the anatomical cadaver is not resolvable; it endures but shifts in and through the concrete practices of which it is a part. In the lab students have to engage with this ambiguous and unruly figure. They cannot just sit and ponder the ontology of the cadaver or muse over their shared common humanity and mortality. Their relation to the cadaver is one characterized by concrete practices and work. It is to these practices that I now turn.

Dissecting respectfully

As Danish legal scholar Janne Herrmann (2011, 291) has argued, ‘The use of the cadaveric body for scientific and educational purposes involves a redrawing of the traditional boundaries between the decent and the indecent, making these acts acceptable that would otherwise be regarded as assaults on the sanctity of bodily boundaries’. This legal redrawing translates into a socially negotiated redrawing, as students have to figure out how to carry out acts on dead bodies that would be illegal and morally indecent under any other circumstance.

As medical students engage with the cadaver they have to make it into a workable entity, a kind of object. At the same time however, students are told to be respectful of the cadaver, and thus to treat it kind of like a person; they have to recognize its ‘thanatocitizenship’ (Simpson and Douglas-Jones, this volume). These two demands – to dissect and to be respectful – are bound up in the intentionality of the former deceased person who bequeathed their body to the lab, casting the body as something that deserves the respect afforded to human remains but also as something that needs to be dissected, indeed something that has expressed a wish to be dissected. ‘Respect’ was a word I heard constantly in the dissection lab, but it was hardly ever defined. On different occasions, I tried to ask the students and instructors explicitly what it meant to treat the cadaver with respect. It turned out to be difficult for them to articulate. All of them could come up with examples of things that would be disrespectful but paying respect in a positive sense was difficult to explain. Rather than seeing this as an insufficient articulation on part of the staff and students, I argue that respect in the dissection lab should not be understood as an abstract set of principles but instead as something that is attempted through negotiation, pondering, and concrete practices. This raises the question: how do you treat a medical cadaver with respect while you objectify, use, and dismantle it?

In the West, subjects and objects, or people and things, are thought to belong to different spheres and to deserve different treatment (Kopytoff 1986; Hoeyer 2013). Part of the apparent dilemma surrounding the use of cadavers and showing them respect stems from this bifurcation of entities into things that can be used, sold, and disposed of with a certain degree of ease and people who are not to be used or sold and who deserve a certain degree of respect, even in death. From a human rights perspective, objectifying and upholding the dignity of the dead seem to be at odds (Herrmann 2011). Treating the cadaver 'like a thing' has certainly (and rightfully) raised the suspicion of several social scientists visiting dissection labs in the past (see for instance Hafferty 1991; Segal 1988; Sinclair 1997). Whilst their insights and critiques have been both insightful and relevant, I want to take a slightly different approach. I take the cue from recent anthropological attempts to 'reconsider detachment' (Candea et al. 2015), not as a negatively valued opposition to engagement but as something that may hold value in itself. As such, in trying to tease out how respect and dissection relate in the dissection lab, I highlight both connection and disconnection, engagement and detachment, as I argue that the dynamics and interwoven nature of engagement and detachment are what make up the rhythms of the dissection lab.

Anatomical dissection is inherently violent work. One starts out with a whole body and then fully dismembers it, severing one or both legs from the body, cutting open skin and folding it back like the cover of a book to expose the underlying structures, clearing away fat and connective tissue with anatomical tweezers and gloved hands, cutting the ribcage open and severing lungs and heart from their abode, and, ultimately, cutting open and removing the top of the head and taking out the brain. Dissection includes actions that would, by Danish law, under any other circumstance be judged as indecent molestation of a dead body and a transgression of the dignity of the dead (Herrmann 2016). Prentice (2013, 60) similarly notes how students have to balance violence and harm, so that physical damage is not equated to evilness. The violence inherent in anatomical dissection seems at times to have the potential to draw the cadaver too far into the realm of things, further than the students find easy to accept. Cutting open the head and removing the brain stands out as an overwhelming experience for the students but also for me as an observer. This is not just due to the fact that the head and face are seen as very personal but also due to the violence of the process. I quote at length from my field notes:

In order to get to the brain you have to cut off the top of the head. First the skin is cut over the head and the skin is then peeled off the bone, folding it backwards down the neck and forwards downward over the face covering the eyes. I am surprised how easy the skin is folded like that, without tearing or breaking. An instructor is doing this. The students are standing around, some in a semicircle behind him, others down the sides of the cadaver. They are all quiet. The instructor gets up and retrieves an electrical bone

saw. He then begins cutting into the bone covering the top of the head. Several students flinch and take several steps back. They also start talking amongst each other, disbelief, disgust, and fascination apparent on their faces. More students arrive. ‘It is quite a crowd-puller’, one of the other instructors says to me continuing, ‘I find this quite violent. I always keep my distance each time. But there are always some blokes that are like’ – she changes her voice to a deep tone – ‘when do we get to open the head?’

Dismembering and dismantling a human body – in some ways almost destroying it – is a practice that calls forth feelings of horror and fascination. Other practices that were equally violent, such as cutting open the ribcage or using force to pull apart structures, had a similar effect and often made students flinch and draw back from the table, but also made some come in closer. Consider also the following field note, which takes up the fact that each cadaver is shared among three or four groups of students, who come in at different times of the day, working on parts of the body that have been assigned to their group:

I have been talking at length with a medical student. Amongst other things, we have talked about the dual feelings of disgust and fascination and we come to talk about what the things are that she finds most overwhelming or difficult. She says, ‘The way we share them. That several different groups come by. If it was that we were 4 to 5 people and then had him for ourselves (points to the cadavers head), that would be better. Both for myself but also for him (she points again). It becomes a little too much like shift work and then he becomes like a thing you can just throw around between people, that then some people get the left arm and some get the right leg. That is a bit strange. Also that we tie them to the tables like that (points to the arm which is secured to the table with string, so it doesn’t move when it is dissected). Then I think that this way I would not want my mom to be treated.’

This quote nicely sums up several of my points. The student speaks of her unease with the cadavers becoming too much like things and couples this unease to the thought of her own mother as a potential anatomical cadaver. Strapping down the cadavers and having them be shared by several groups seemed for her to go against the grain of treating cadavers with respect. These are however the real particularities of how dissection is done. How do staff and students attempt to strike a balance between the violence of dissection and the respect for the deceased? I observed four strategies: balancing treating the anatomical cadavers as objects and as people, adhering to standards of aesthetics and professional neatness, employing humour, and putting the cadaver to good use. I consider these four strategies concrete examples of the dynamic interweaving of connection and disconnection, engagement and detachment.

Balancing objectification and personhood

In attempting to balance violence and respect, the medical students I observed oscillated between objectifying the cadaver and invoking the personhood of the donor.

During dissections the students engaged in techniques that helped to distance them from the person in the cadaver. As one of the students put it, 'It is a balancing act. If I think about the person all the time, I wouldn't be able to do this'. Much of the time in the dissection lab was spent clearing away fat and connective tissue in order to get to the anatomical structures they are instructed to find. Students were absorbed in the concrete details of dissection, backs and fingers hurting from the positions and labour to which the students' bodies were unaccustomed. The students had specific learning goals, and the threat of an exam looming in the not-so-distant future. After talking to two female medical students and telling them that I was interested in their experiences as they dissected, I recorded the following field note:

One of the medical students says, 'It smells'. A second one interrupts her and says, 'We are very happy for this. You can write that down'. The first one responds in a high-pitched voice, 'Happy about it? He is dead and he smells'. She crinkles her nose and leans backwards away from the body in front of her. The second student sighs, 'Yes, but that is not what it is all about. If I want to learn something I have to forget that he is laying there and then just get started dissecting'. The others around the table nod but also start teasing her gently, [saying] that she might want to work in forensics in the future, if she finds this so interesting.

What is interesting here is that the second student explicitly says that in order to actually cut into the skin of the body before her, she has to forget the person; she has to 'forget that he is laying there'. She also stresses the purpose: learning. This was the group's first day dissecting and the others around the table were all markedly more uneasy than she was. They were not quite ready to see this body as a learning tool, they were not ready to forget that this was a dead person. In their teasing lies a mild scolding that one should not be too interested in this, not too fond of cutting into dead bodies.

Students not only curtailed what they might see as too overt objectification, they also actively made remarks about remembering that the cadaver was once a person during the dissection, both among themselves but also to me. In the following field note I describe speaking to a student who was cleaning the instruments after the day's dissection was finished: 'The student tells me that she really doesn't think about the person most of the time but reminds herself to do so. She says, "I remind myself that he is somebody's someone". I say, "Yes, a brother or a

father”. She nods and responds, “Yes, and then I try to act and think like I would want people to do with one of mine””.

Notice how invoking the personhood of the cadaver makes the student think about her own relatives as potential anatomical cadavers and use these thoughts as guidelines for what may be deemed respectful to do – or even think – in the dissection lab. In doing this the students seemed to attempt to figure out how to follow the ‘last wishes’ of the donor in a respectful manner, through imagining what it would be like if the cadaver on the table was a dear loved one. Through doing this she attempts to circumvent the extended liminality in which the cadaver finds itself, restoring it as a person who once lived and as a deceased person with relatives. Students similarly think about themselves as potential anatomical cadavers. Often, with both students and instructors, I ended up talking with them about whether they wanted to donate their own bodies to anatomical dissection. Their answers widely varied. One student said:

I have thought a lot about it. Also because can I sit here and do this if I am not willing to give up my own body in the same way? Dissection I would do, but to be a specimen, where you have a torso and perhaps you can see that there are hairs on the butt and . . . Like, sure, that is okay, but I would be afraid that people wouldn’t treat it with respect. Because those anatomical specimens they are sort of just thrown around a little and become almost like things.

Here, the student explicitly contrasted respect and treating the cadaver like a thing. Her fear, that her donated body would not be treated with respect, would be treated too much like a ‘thing’, was a recurring theme among both students and instructors. However, I also came across students who expressed a deep personal wish to donate their own bodies. One student said, whilst laughing a little, ‘Yes, I am definitely going here after I die. And I hope I’m prepared as a specimen so I can stay here for many years’. Interestingly this student did not draw on a language of objectification. She did not even talk of her *body* being donated but of *herself* going into the lab after death and staying there for years to come, enveloping the wish to donate in a vision of postvital life and granting her agency well beyond death.

As mentioned above, the face and the genitalia were usually covered with a cloth when they were not being dissected. Asking students why this was done, they responded they were not sure, but many said that it was out of respect for the person. An instructor said, ‘Sure, respect for the deceased is part of it. But it is also because it makes it easier for the students’. The covering of the cadaver’s face is an ambiguous move then. It may be seen as paying respect to the deceased but it could also be seen as an objectifying move, making it easier to treat the cadaver like a thing. Taking seriously the value of detachment (Candea et al. 2015), covering the face can be understood as an action that allows for students to detach, to disconnect, but

that simultaneously upholds the dignity of the cadaver. This demonstrates how respect and detachment are not necessarily opposites but may coexist in practice, and how detachment may sometimes serve as a preliminary step that enables later engagement. Although it can be overwhelming and emotionally difficult to dissect the head, the students did not altogether avoid looking at the head and face of the cadaver. I saw students lift the cloth and peek under it to see the face of the cadaver; one of them later explained to me that she felt that it would not be right to dissect a body whose face she had not seen. Through concrete detachments and engagements with the cadaver as thing and person the students thus attempt to work out what respect is, in a situation where there are no sure guidelines.

Different institutionalized techniques that uphold the individuality of the cadavers also were practised in the dissection lab. One of them was the use of buckets at each table, as repositories for the bodily material that was cut off the cadavers. The instructors told the students that it was very important that all the material removed from the cadaver be put in the correct bucket. I was told that each individual bucket was emptied each evening and all the material from each body kept so that it could be returned to the waiting casket and be cremated together with the body in the end, as the following field note shows:

The medical student meticulously scrapes all the bodily material that she has gathered in a tray into the yellow bucket at the end of the table, taking her time to make sure that even the smallest bits of tissue end up in the bucket. She says, 'I think it is a good way of doing it. So it is cremated with the rest and the family can get it if they want. It is such a big deal that someone has chosen to donate their body so we can learn by cutting in it. Therefore it is important with respect around it'.

Making sure that the tissue removed from the body was not treated like regular waste but kept for the body that it originated from was important for many of the students that I talked to and was always coupled to showing respect, just like remembering that the cadaver in front of them used to be a person with relatives and friends. According to these practices, materials cut from cadavers are not to be mixed together; they are not just objects that can be discarded as regular waste. These institutionalized practices may be understood as attempts to deal with the liminality of anatomical cadavers, underscoring the temporary nature of their stay in the dissection lab. The practices also serve to counter the dissolution of the integrity of the person, which is inherent to dissection, thus attempting to treat the bodies according to generally accepted rules of decent behaviour towards bodies of the dead, where commingling of human remains is generally viewed as morally troublesome. In this way, attempting to uphold the integrity of the dissected cadavers is not only about respecting the individual dead person but also plays into larger societal values of how to deal with the dead.

Aesthetics

During the weeks of dissection, students were taught how to care for the cadavers, how to keep them moist, so that the next day's dissection work would not be obstructed. But the practical side of caring for the cadaver also entailed a more affectual side, as this field note demonstrates:

As the students get ready to leave they place gauze where they have cut open the skin. The gauze is moistened and the skin is then folded back in place over the gauze. String is then tied around, holding the skin in place. I ask one of the students why this is done. She responds, 'To prevent the muscles from drying out'. She pauses and smiles, 'And then it looks so cute with a little bow', she says, as she proceeds to make a bow out of the string. She pads the arm of the cadaver and smiles at me again.

Another time, an instructor became angry and scolded a group of medical students who had cut off the skin of the arm and discarded it, instead of folding it back. 'That is not respectful. The cadavers have to look nice', she told me, as she rummaged through the bucket of tissue in order to find the skin and place it on the arm again, tying it with string. Notice how respect is here coupled to 'looking nice'. Respect and care here take on an aesthetic side and are practised through thoroughness and neatness. In her doctoral thesis about organ donation in Denmark, Anja Jensen (2011) points to a process of aestheticizing the bodies of brain-dead organ donors as a way of making a medical procedure visually and socially acceptable. She draws on the work of Janelle Taylor (2011) and her concept of 'moral aesthetics', through which she argues that things that are aesthetically pleasing are often equated with what is morally right. Jensen shows how these aesthetic moves are part of a sense-making practice that takes place not just for the sake of the patient and their family but also for the sake of the staff themselves. Making cadavers 'look nice' and adhering to professional values about neatness and thoroughness thus become part of making it acceptable for students to use cadavers.

The fact that aesthetics matter also came up as students contemplated whether they would themselves donate their bodies one day. In a room adjacent to the dissection lab, where the prosected specimens were kept, two students each held up a plastinated hand, and one said: 'These are so beautifully done. If anything, one should be plastinated'. Contrast this sentiment with that of the student who felt uneasy about becoming a specimen, such as a torso where 'perhaps you can see that there are hairs on the butt'. These two instances of thinking about one's own body as a potential anatomical cadaver point to two very different images, one that invokes unease and fear of disrespect and the other one of beauty. Here objectification does not necessarily feel disrespectful; it is countered by aesthetics, the production of a beautiful death. Again, this underscores how dissection is not just guided by narrow medical or

pedagogical aims but also plays into ways of making death socially meaningful and entails moral negotiations of how dissection can be made to cohere with societal ideas of caring for the dead.

The role of humour

In the three labs that I visited I observed the use of humour in a variety of situations, both inside the lab and during breaks. I here take ‘humour’ as a kind of umbrella term, covering several acts such as joking, irony, mild teasing, and laughter (Lippitt 1994). What role did humour play in the dissection lab and how was it related to the basic ambiguities of dead bodies, including respectfully using bodies as tools? Bioethicist Katie Watson (2011), in an insightful report, looked at the role of gallows humour among medical personnel. In it she points to how humour may be seen as a kind of release of tension in the face of absurdity, uncertainty, incongruity, and unresolvable situations, all feelings and situations that are not unknown to medical professional life, let alone to dissecting a dead human body. As she writes, ‘Medicine is an odd profession, in which we ask ordinary people to act as if feces and vomit do not smell, unusual bodies are not at all remarkable, and death is not frightening’ (Watson 2011, 43).

The humour that I observed most often ran along the lines of the ambiguities that I outlined above. For one, they took as point of departure the absurdity or grotesqueness of the situation, and how it had become normal for them to go into the lab every day and cut apart dead human bodies, how transgression had become normal. Writing about the role of laughter in the encounter of the absurd and the uncanny, Klaus Hoeyer (2013, 156) makes the insightful point that laughter lets us embrace that which is ambiguous; it lets us ‘both connect with and distance ourselves from that which does not fit the categories of our worldview’. He further points to laughter as a reaction to the grotesque, to situations that transgress bodily boundaries and remind us of our shared human corporeality (Hoeyer 2013). Facing the cadaver, students could not help but relate this human body to human beings that they knew, to loved ones and to themselves. They were of the same world, only arbitrarily differentiated by time, and the death that time will bring. They were indeed potentially just ‘one breath apart’ (Bertman 2009). This encounter sometimes triggered laughter and joking as they realized that they were like the cadaver on the table, that they were flesh and bones, and that they will one day inevitably die. In the following excerpt from my field notes, we witness a situation where a student attempts to use joking to engage with the shared human materiality of cadaver and students:

One medical student looks across the table at one of the other students. She points at her and says to the rest of the group gathered around the table: ‘She would be easy to dissect. There is not much fat on her’. Another student makes a dry laughing sound but

she doesn't look up and doesn't smile. The first student continues, 'Can't you just get up there. It's just a little cut'. Two of the other students both look at me and laugh in a way that I can only take to be apologetic. None of them look at the student making the joke. All the while, the fourth student just sits on her chair next to the cadaver staring into the air. She doesn't touch the cadaver the entire day.

Notice how the first medical student went further than the other students found comfortable. Through their silence, through the lack of shared laughter, she was reprimanded. I observed other instances in which one student's jokes were too crude for the others, and they loudly and sharply stopped the joking. Jokes that were deemed too disrespectful, for example, likened dissection to the butchering of animals, comparing the parts of the human body with cuts of meat one would buy in the supermarket. Again we see a careful and treacherous balancing, walking a fine line between what is morally acceptable and what is deemed disrespectful. This balancing act was not an individual one but a shared endeavour, as students pushed and pulled on each other, keeping each other in check but also pushing the boundaries of oneself and others.

Intuitively we may feel that all joking around dead bodies is at odds with showing respect for the deceased, that joking dehumanizes and ridicules the cadavers and future patients. It is not up to me to judge when humour may be acceptable and when it may not. However, if we see humour and laughter as much as acts of connection as of distancing, allowing for both detachment and engagement, we may see humour as one of the balancing acts that students take part in as they negotiate the ambiguous status of the cadaver in front of them as well as the ambiguousness of using them respectfully. Watson (2001, 43) writes: 'Being off-balance can make us laugh, and sometimes laughing is what keeps us from falling over'. As such, humour is not necessarily opposed to compassion or respect; it should not be seen as external to dealing with the responsibility of the postvital lives of donors, but as a reaction to the difficult work with the ambiguous. This also becomes clear as humour is not reserved to medical students. Again and again as I presented on this topic at anthropological conferences and meetings or talked about my findings at family dinners I encountered laughter among the crowd, even though I had not made any joke. Faced with the enduring ambiguity of dead bodies and with the realization of our own frail corporeality and inevitable death, we sometimes laugh in order to be able to keep on living.

Putting the cadaver to good use

Taking seriously the fact that the anatomical cadavers on the steel tables have ended up in the dissection labs because they wanted to (Olejz and Hoeyer 2016), we may want to reconsider the relationship between respect and use. I want to argue that the apparent conflict between

respect and use, which the students sometimes felt very strongly, should not be interpreted as a contradiction. There is not necessarily always a clash between dissection and respect, although there certainly has been earlier (Richardson 2000; Sappol 2002). Here then we have to take seriously the historical but situated nature of the use of cadaveric material and of its intersection with donors' wishes for postvital living. Consider the following excerpt from my field notes:

Upon being shown around on the very first day, the program leader, watching my face intently for my reaction, showed me a big machine, which looked like it belonged in a carpentry shop rather than in a medical lab. He explained to me that the machine is used to cut the cadavers into smaller pieces if the whole body cannot be used due to for example medical conditions. Then the head might be given to the dentists, a leg may be given to a surgical course, etc. The program leader remarked that this of course looked quite morbid and grotesque, but that he felt that it was in the spirit of the donors, that the cadavers were used as much as possible, so that the gift had not been given in vain. Looking at me with sincerity, he said that he felt that they 'owed it to the donors'.

Here we see how the origin of the cadaver, the dedicated donation, plays into how dissection is made sense of. Cutting bodies apart in the lab does not just take place in the name of science or pedagogy but also entails a care for the deceased and an attention to their wishes for a postvital life. Students were keen on this idea as well, echoing the notion that showing respect meant making the most use of the cadaver as possible, doing things, they said, that they would normally feel terrible doing. Transgressing their own initial moral and emotional boundaries could then be seen not as an unethical act but as a professional virtue (see also Hoeyer and Jensen 2012).

One of the students explained to me that she felt 'enormously grateful' and saw it as 'an honour and a privilege to be allowed to do this'. Her concern was whether she would become skilled enough by it and so she explained to me that her way of showing respect was to make sure that she was as prepared as possible each morning upon entering the lab, reading all her notes, and going through the anatomical atlases the night before. Interestingly, then, use and respect can align in the dissection lab. Putting the cadavers to good use can be seen a way of expressing appreciation and thereby respect. Cutting open the body of a person, albeit dead and voluntarily donated, should have a meaningful purpose. The students wanted to learn and become more skilled, and thus the gift of the body was not given in vain. In her survey of reactions of Swedish medical students to dissection, psychologist Margareta Sanner (1997, 182) similarly found that making efficient use of the cadaver and thus not spoiling the donation was considered a way to pay respect to the donor. As such, notions of utility do not necessarily

come from 'objectifying' the body but might as well stem from enacting the body as a particular sort of subject: a donor who voluntarily donated their body. Thus, utilization in this instance does not erase the agency of the body in front of the students. Interestingly, Danish donors similarly speak of utility not as a contradiction to dignified death but as a deeply personal way of securing a meaningful death and legacy, and Hoeyer and I (2016) have argued that donation is a way of retaining a kind of active agency beyond death (see also Richardson and Hurwitz 1995; Bolt et al. 2010 for similar findings in other countries). Notions of utility then somehow straddle the divide between objects and subjects; it seems to simultaneously enact the cadavers as people to be respected and things to be used. This is possible because the contemporary supply of bodies for dissection rests on donation, because dissection takes place at an intersection of medical training and meaning making for donors, because utility does not necessarily strip rights but may position the cadaver within a register of thanatocitizenship.

Concluding remarks

In this article I have invited you into a space usually closed off: the dissection halls where medical students for hundreds of years have learned their trade and where certain bodies of the dead live out postvital lives, acquiring and generating meanings and values. In this space and in the encounter of students and cadavers, an enduring ambiguity resides. The focal point of this ambiguity is the cadaver, a multiple and liminal entity that straddles, on an impossible scale, the world of things and the world of people, the dead and the living, the particular and the universal, the strange and the familiar. Students have to engage with this ambiguous figure; they have to construct a workable relation to it. Tied to this is the ambivalent situation of dismantling a body whilst being respectful to it, of connecting and disconnecting, engaging and detaching. In this article I have pointed to some of the ways that students deal with this: invoking the personhood of the cadaver, humour, professional neatness and aesthetic care, and making good use of the cadaver.

These engagements in the lab matter not just because they teach students about bodies or death. They hold important lessons for future clinical encounters. Through the encounter with dead bodies, future relations with patients and their bodies are established. Encountering the liminal and ambiguous beings that anatomical cadavers are is perhaps doubly powerful because medical students themselves are going through a rite of passage in the dissection lab (Dyer and Thorndike 2000; Crisp 1989; Coulehan et al. 1995), transforming them from laymen to medical professionals. Whilst medical students are handed the responsibility of caring for liminal cadavers, the cadavers can also be seen as the ritual guides of the transformation of students that the dissection labs entail. Exploring the daily life of dissection labs should thus not only be guided by the question 'How do we avoid medical students becoming insensitive?'

but also by the query ‘How can the dead teach students something valuable?’ (see also Douglas-Jones, this volume). In the dissection lab students try out the difficult task of working respectfully with other human beings. We may understand this as a kind of ethics training in practice, which differs from a traditional bioethical approach. In the dissection lab ethics are as much felt as they are discussed. This is not about applying abstract principles to concrete cases. Drawing on the work of Cheryl Mattingly (2014), we may understand the dissection lab also as a kind of ‘moral laboratory’, where students get to experiment with how to deal with ambiguity and uncertainty, engaging in a kind of moral becoming. Understanding anatomical dissection not just as a pedagogical exercise teaching students about the morphology of the human body but also as part of the trajectory of the postvital life of donated cadavers thus highlights the enduring effects of the encounter between cadaver and student. The transformative experience instils a kind of grounded moral horizon in students that may continue to shape their endeavours as medical doctors and surgeons who will care for patients of the future.

Interestingly the anatomical profession itself is increasingly experimenting with more ‘humanistic approaches’ to anatomical teaching (Štrkalj 2016), for instance by giving back identity to the donor (Talarico 2013) or setting up donor luncheons where families of the deceased meet the students who will dissect the donor’s body (Crow et al. 2012). From an anthropological perspective, it will be interesting to see how these attempts, which strategically make explicit the intersection of donors’ wishes for their postvital lives and the pedagogical aims of anatomical dissection, will play out in practice, and what consequences they will have for the social lives of the dead as well as the social and professional lives of the still living.

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