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The Decline of Clinical Dissections and the "Culture of Death"[1]

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Abstract
In recent decades the number of clinical dissections has declined rapidly in all Western societies. In seeking to explain this development, one must set it within the frame of the general role of dead bodies and death in general in contemporary society. Against the background of two opposing theses – the continuing repression of death and the 'new culture of death' – this paper sketches the historical development of clinical dissection, whose practice was central to the development of what Foucault called the modern "medical gaze." The question of the reasons for its decline was addressed by a representative survey which showed that dissections are well accepted by the public. The article concludes that while the reasons for the decline in clinical dissections lie in the health system and modern medical practices, other forms of dissection, dead bodies, and death in general are experiencing increasing popularity, in a popular culture of death.

Keywords
death, clinical dissection, corpses

Introduction

Clinical dissections are conducted when people die in hospital in order to detect the causes of their death. As opposed to forensic dissections aimed at clarifying potential external agents for death, clinical dissections focus on internal causes of death. For this reason, clinical dissections are considered a major source of data for epidemiology and hospital quality

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control.[2] In Western societies, clinical dissections are routine procedures conducted by clinical pathological institutes. In some countries, medical personnel who wish to investigate the death of a person are required to ask for explicit consent from the bereaved (in Germany as part of the pre-operative interview) in order to transfer the corpse to the pathology department, while in other societies persons on the verge of death or the bereaved have to explicitly dissent in order to avoid a dissection.[3]

Clinical dissections have been little studied so far, but they are of some importance to modern society. It was Michel Foucault in particular who argued that the introduction of dissection around 1800 introduced a fundamentally new form of *epistemé*, a new medical gaze, by intruding into the body in order to objectively identify the causes of illness and death.[4] Although known as a practice before, the growing acceptance of dissection was accompanied by a new and specifically modern form of medical knowledge production and, as it were, *pars pro toto* for modernity.[5] While Foucault's thesis has been subject to severe criticism, it provides a very useful background for a phenomenon that has hitherto lacked any plausible explanation: while clinical dissections have indeed become obligatory in all modern societies, for the last forty years or so we have observed a steep decline in this practice in all Western countries. The major question I would like to address is: How can we explain the decline in clinical dissections in recent decades? In order to answer this question, I shall try to frame this trend against the background of more encompassing historical tendencies indicated by Foucault and extended by a thesis regarding the popularization of death in late modernity.

In order to address the question as to the decline in dissections, I shall first sketch the major tendencies concerning death in modernity. In the next section I will outline the history of the clinical dissection with its

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[2] Cf. Dominik Groß, *Die Entwicklung der inneren und äußeren Leichenschau in historischer und ethischer Sicht* (Würzburg: Königshausen & Neumann, 2002).

[3] Cf. Brigitte Tag, "Rechtliche Aspekte der Sektion nach Schweizer Recht" in: *Der Umgang mit der Leiche. Sektion und toter Körper in internationaler und interdisziplinärer Perspektive*, edited by Brigitte Tag and Dominik Groß (Frankfurt am Main / New York: Campus, 2010), pp. 25-61.

[4] Michel Foucault, *La naissance de la clinique. Une archéologie du regard médical* (Paris: Presses Universitaires de France, 1963).

[5] Historical support can be found in the study by a colleague on our research team, Dominik Gross, *Die Entwicklung* (cit. note 2). Cf. also Julie Doyle, "The Spectre of the Scalpel: The Historical Role of Surgery and Anatomy in Conceptions of Embodiment," in *Body & Society*, 2008, 14, *1*: 9-30.

recent decline. Then I will discuss the results of a survey conducted in Germany to test two hypotheses regarding the reasons for this decline, which lead by way of conclusion to the thesis of a paradigm shift in the role of death in contemporary society which may be referred to as the (popular) culture of death.

Death in Modernity

In sociology, the problem of death is not only posed to the individual; death is a problem for society. The societal concern for death is reflected in certain institutions specialized in dealing with it, such as funeral homes and cemeteries; it is also expressed in certain forms of action, ritual, and knowledge (such as funeral rites or conceptions of the otherworld). Institutions, rituals and knowledge vary across different societies and cultures, and they can change over time, i.e. historically. In what remains the most encompassing reconstruction of the historical transformation of institutions, actions and knowledge about death in Western (specifically French) society, Ariès has vividly shown how our pre-modern predecessors managed to tame death. Modernity, he argues, has led to a return to barbarism with respect to death, i.e. to an expatriation and repression of death.[6] By expatriation he is referring to what sociologists call institiutional specialization or differentiation, for since the beginning of the twentieth century institutions in charge of death have been established on a large scale, such as hospitals, pathology departments, and institutes of funeral services.[7] The institutional specialization of death can be linked to the development and expansion of modern scientific medicine. Alongside medicalization and technicalization, the professionalization of death has increased dramatically, leading to the rise of various new professions and disciplines (such as thanatoaesthetics).

Since the medicalization of death refers to the substitution of religious knowledge by medical knowledge on death, it has been accompanied by

[6] Philippe Ariès, *L'Homme devant la mort* (Paris: Seuil, 1977), p. 739.

[7] Nassehi and Weber underline this notion of the "repression" of death; see Armin Nassehi and Georg Weber, *Tod, Modernität und Gesellschaft. Zu einer Theorie der Todesverdrängung* (Opladen: VS, 1989). The notion of "taboos" is stressed by Tony Walter, *The Revival of Death* (London: Routledge & Kegan Paul, 1994); on the denial of death, cf. Ernest Becker, *The Denial of Death* (New York: Simon & Schuster, 1973).

a secularization of the meaning of death. Thus the strong bond between the world of the dead and this worldly discipline was broken (i.e., by the disappearance of "hell"),[8] and death lost its constitutive meaning as a core *topos* in the sacred cosmos of Western Christian religiosity.[9] In addition to the increasing importance of scientifically legitimated knowledge, the medicalization of death has resulted in the increasing use of technologies to detect, manipulate, and restore dead bodies. Some authors assert that this has even led to the "end of natural death,"[10] since the moment of one's passing is increasingly determined by machines.

Medicalization and technicalization has also reduced the presence of death in the life-world of most people, a process often referred to as the "privatization" of death: "Rather than being an open, communal event, death is now a relatively hidden, private experience which is marked by an increased uneasiness over the boundaries between the corporeal bodies of the living and the dead."[11] Ever more people are dying outside of their homes, and ever fewer people have – increasingly sparse – contact with dying and dead people. In numerical terms, already in 1963 as few as 25% of mourners had witnessed the death of their closest relatives, and 70% had not participated in a funeral in the past five years. The privatization of death has been seen as a corroboration of the Freudian thesis that modernity "represses" death: the further we advance into the new century, the more irritating the presence of the dead at home seems to have become. Norbert Elias, for example, complained about the "loneliness of dying," while Glaser, Strauss and Sudnow have shown empirically how death has moved beyond our awareness and became socially invisible.[12] This seems to verify the psychoanalytical hypothesis of repression: death has become a

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[8] For the majority of people, death has been strongly linked to the Christian notion of transcendence. However, since the nineteenth century the close connection between the two has drifted apart, in particular the relationship of death to the idea of hell and punishment. Cf. Michael Ebertz, "Die Zivilisierung Gottes und die Deinstitutionalisierung der 'Gnadenanstalt' . Befunde einer Analyse von eschatologischen Predigten," in *Religion und Kultur,* edited by Jörg Bergmann, Alois Hahn and Thomas Luckmann (Opladen: Westdeutscher Verlag, 1993), pp. 92-125.

[9] Thomas Luckmann, *Die unsichtbare Religion* (Frankfurt: Suhrkamp, 1991), p. 114.

[10] Ivan Illich, *Limits to Medicine* (London: Marion Boyars, 1976).

[11] Mary Bradbury, *Representations of Death: A Social Psychological Perspective* (London and New York: Routledge & Kegan Paul, 1999), p. 165.

[12] Cf. Norbert Elias, *Über die Einsamkeit der Sterbenden in unseren Tagen* (Frankfurt am Main: Surhkamp 1977); Barney Glaser and Anselm Strauss, *Awareness of Dying* (Chicago: Aldine 1965); David Sudnow, *Passing On: The Social Organization of Dying* (Englewood Cliffs, NJ: Prentice-Hall, 1967).

modern taboo, to be encountered only indirectly or in aesthetically embellished forms.[13]

Regarding the background of the close ties between modernity and expatriation, repression and the "tabooing" of death by way of its technicalization, medicalization, privatization, professionalization and secularization, the late twentieth century seems to have witnessed dramatic changes with respect to our relationship to death and dead bodies. Instead of an increasing privatization, Gorer for example, already noted a new "pornography of death" or, as Schneider puts it, a 'discursivization' of the end of life, as expressed in heated debates on euthanasia, brain death and organ transplants.[14] We also find a growing social movement towards "death consciousness", in the attempt to confer a positive meaning on death.[15] Kübler-Ross's thanatology is being accepted globally, and the natural death movement, the hospice movement, AIDS support groups, and the buddies movement[16] all nourish the new ideal of dying in dignity, peace and awareness.[17]

Whereas the tabooing of death led to an internalization of grief, some authors have observed a "new visibility of death."[18] Evidence for this new visibility can be seen in novel forms of commemoration, the vast popular literature on grief, mourning and death, the increased belief in life after death among young people, and the popular interest in accounts of

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[13] This thesis is elaborated by Walter in *The Revival of Death* (cit., note 6); cf. also Hubert Knoblauch, Bernt Schnettler and Hans-Georg Soeffner, "Die Sinnprovinz des Jenseits und die Kultivierung des Todes," in *Todesnähe: Interdisziplinäre Beiträge zu einem außergewöhnlichen Phänomen,* edited by Hubert Knoblauch and Hans-Georg Soeffner (Konstanz: UVK, 1999), pp. 271-292.

[14] Geoffrey Gorer, *Death, Grief and Mourning in Contemporary Britain* (New York: Arno Press, 1977); Werner Schneider, "Zur diskursiven Ordnung des Lebensendes," in *Thanatosoziologie: Tod, Hospiz und die Institutionalisierung des Sterbens*, edited by Hubert Knoblauch and Arnold Zingerle (Berlin: Duncker & Humblot, 2005), pp. 55-79, p. 56.

[15] Lucy Bregman, "The Death Awareness Movement: Psychology as Religion?" in *Religion and Psychology: Mapping the Terrain. Contemporary Dialogues, Future Prospects*, edited by Diane Jonte-Pace and William B. Parsons (London and New York: Routledge & Kegan Paul, 2001) pp. 320-332.

[16] Cf. Hubert Knoblauch and Arnold Zingerle, "Thanatosoziologie. Tod, Hospiz und die Institutionalisierung des Sterbens," in *Thanatosoziologie* (cit. note 14), pp. 11-30.

[17] Bruce Hart et al., "Whose Dying? A Sociological Critique of the 'Good Death,'" *Mortality*, 1998, *3,* 1: 65-77. The contrast to the notion of taboo becomes quite salient in the concept of the "happy death movement" coined by Lyn Lofland, *The Craft of Dying: The Modern Face of Death* (Beverly Hills: Sage, 1976).

[18] Thomas Macho and Kristin Marek (eds.), *Die neue Sichtbarkeit des Todes* (Paderborn: Wilhelm Fink Verlag, 2005).

near-death experiences that seems to have reinvigorated the lost *ars moriendi*.[19]

The stronger presence of death in public is linked to the increased institutionalization of the forms of dealing with death, which follow patterns that are quite different from classical modernity. One of these forms is the vast hospice movement which is mainly driven by medical laypersons. In academic medicine as well, we find expansion of the branch of palliative care, turning toward the treatment of patients who have no chance of recovery. Also, with respect to the funeral industry, Kahl observes a strong tendency to respond to the market and the public, in a phenomenon that has also englobed funeral rites and practices (such as cremation, urns, the musealization of cemeteries, etc.).[20]

Therefore, in 1986 Höpflinger had already detected a "revolution of death," and in 1994 Walter affirmed the observation of a "revival" of death.[21] Authors who still believed in the repression thesis changed their minds in the face of the trumpery dead,[22] and even Pope John Paul II felt the need to condemn what he called the "culture of death." The new forms of dealing with death have been highlighted by Walter, who suggested that we should distinguish between "modern death" and "postmodern death."[23] Walter claims that death is being re-appropriated from the medical experts and the medical system by the actors most directly implicated; instead of controlling death, actors prefer to live with the dying and thus to accommodate death.[24]

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[19] Glennys Howarth, *Death and Dying: A Sociological Introduction* (London: Routledge & Kegan Paul, 2007); Hubert Knoblauch, *Populäre Religion* (Frankfurt am Main: Campus, 2009).

[20] Cf. Norbert Fischer, *Wie wir unter die Erde kommen. Sterben und Tod zwischen Trauer und Technik*. (Frankfurt am Main: Fischer, 1997); Antje Kahl, "Das Design bestimmt das Bewusstsein? Zur neuen Sichtbarkeit im Bestattungswesen," in *Die neue Sichtbarkeit des Todes* (cit. note 18), pp. 119-131.

[21] Walter, *Revival of Death* (cit. note 6); François Höpflinger, *Bevölkerungswandel in der Schweiz. Zur Entwicklung von Heiraten, Geburten, Wanderungen und Sterblichkeit* (Grüesch: Rüegger, 1986).

[22] Cf. Armin Nassehi and Irmhild Saake, "Kontexturen des Todes," in *Thanatosoziologie* (cit. note 14), pp. 31-54.

[23] Tony Walter, "Facing Death Without Tradition," *Contemporary Issues in the Sociology of Death, Dying and Disposal*, edited by G. Howarth and G. Jupp (Basingstoke: MacMillan, 1996), p. 195.

[24] As the transformation itself can be hardly denied, one might contend that the notion of "postmodernity" with respect to death is being used in a rather misleading way. For it is precisely those theoreticians who are said to represent "postmodernity", such as Baudrillard, Bauman and Foucault, who take a rather "modernist" stance towards death as being

Table 1. Traditional Death, Modern Death and Postmodern Death (Walter 1996)

	Traditional death	Modern death	Postmodern death
Authority	Tradition	Professional expertise	Personal choice
Authority figure	Priest	Medical doctor	Self
Dominant discourse	Theology	Medicine	Psychology
Coping strategy	Prayer	Silence	Emotional expression
What is on journey	Soul	Body	Personality
Bodily context	Life with dead	Controlled death	Life with dying
Social context	Community	Hospital	Family

Are we truly witnessing an epochal change in the role of death? Are we faced with two opposing tendencies, or are the "postmodern" forms of death only of minor importance for contemporary society?

A Short History of Clinical Dissections

We chose to address this very broad question by undertaking a study of clinical dissection for three reasons. First of all, clinical dissection offers quite a clear case for the study of death since it is concerned with the dead body, i.e., that which is said to have become a taboo by theorists of modern society (e.g., in terms of feelings of shame and disgust).[25] Secondly, dissections are closely connected to modernity. Although corpses have been dissected for centuries, it is only in modern times that clinical dissections became obligatory. Thirdly, and most importantly, clinical dissections have undergone a rapid decline. Before we turn to the explanation of this

"repressed". Baudrillard, for example, assumes that "postmodern society" is attempting to abolish death; Bauman too states that death is being killed in postmodernity. Finally, Foucault claims that the public rituals around death are diminishing and that death has become the most private matter in the world – thus arguing for the "privatization" that is considered to be a standard aspect of death in modernity. Jean Baudrillard, *L'échange symbolique et la mort* (Paris: Gallimard, 1981); Zygmunt Bauman, *Mortality, Immortality and Other Life Strategies* (London: Polity Press, 1992); Michel Foucault, *Il faut defender la société* (Paris: Seuil, 1997).

[25] In her ethnography of a funeral institute and a crematorium, Vischer shows very clearly the persistence of myths of pollution by dead bodies. Lilo Vischer Roost, *Alltägliche Tote. Ethnologische Untersuchungen in einem Bestattungsinstitut und einem Krematorium in der Schweiz* (Hamburg: Meiner, 1999).

decrease in terms of the general question, we need to provide a brief historical sketch of the expansion of the role of dissections in modernity.

When dissections started to be performed within an expanding clinical setting in the eighteenth century, they still constituted a mostly marginal activity.[26] The marginality of clinical dissections in pre-modern Western societies is reflected in the fact that at first only marginalized persons such as criminals, the dishonored and the very poor were used as subjects for the first dissections.[27] Then, supported by the growing fear of apparent death and of being buried alive (a fear which was fostered by the incipient spiritualist movement as well as by the – at the time new – technique of mouth-to-mouth resuscitation), the first forensic and anatomic autopsies were undertaken. According to the *Code Napoléon*, corpses needed to be observed for at least 24 hours and in some parts of Europe special rooms were built for this purpose.[28] The major reason for the growing acceptance of clinical dissections, however, was what might be described as a paradigm shift in medicine.[29] Diseases were no longer conceived of as being due to an imbalance in the bodily fluids, but as something to be located and identified in the organs. Foucault called the locating of diseases the "medical gaze," i.e. the intrusion of the medical perspective into the interior of the body, a gaze which resulted in the reconfiguration of all medical knowledge.[30] In our context it should be stressed that this new pattern of intrusion into the body was taken from and modeled on the clinical dissection, which was conducted to locate and identify the reasons for death and, thus, the diseases in the body.

The transformation of the medical gaze was accompanied by a transformation and institutionalization of social roles. Whereas the (male) surgeon used to be a craftsman, he now became an academic and moved up in the hierarchy of the medical professions.[31] During the course of the nineteenth

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[26] Dissections were of course being performed before, as Gross shows. Here stress is laid on the fact that dissections were becoming accepted in medical clinics and in the corresponding movement of modern medicalization that gradually became dominant in Western society.

[27] Groß, *Die Entwicklung* (cit. note 2).

[28] Margaret Lock, *Twice Dead: Organ Transplants and the Reinvention of Death* (Berkeley: University of California Press, 2002), p. 66; Diethard Sawicki, *Leben mit den Toten. Geisterglauben und die Entstehung des Spiritismus in Deutschland 1770-1900* (Paderborn: Schöningh, 2002).

[29] Thomas Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1964).

[30] Foucault, *La naissance* (cit. note 4).

[31] Doyle stresses that surgery is related to a masculinization of medicine. Doyle, "The Spectre" (cit. note 5).

century necropsy became institutionalized, and gradually the coroner's inquest was differentiated from forensic dissection.[32] Shortly after the *Cremation Act* was passed in London in 1902, the Anatomy Law in Saxony for the first time legislated the duty of citizens to dedicate their bodies to the general good.[33] With its increasing acceptance in other countries as well, clinical dissection became a routine procedure for handling dead corpses, within the context of the formal organization of the clinic. Its acceptance can be deduced from the fact that by 1970 in countries such as Austria up to 99.5% of corpses were dissected. While Austria has adopted the "dissent model" in which consent is presumed by the clinic unless notified otherwise, the numbers of clinical dissections were also high in those countries which required that consent be specifically given. Thus, in Switzerland, for example, numbers peaked at up to 55% by the 1950s.[34]

While we can regard the acceptance of clinical dissections as one of the achievements of modern medicine in all Western societies up to the end of the 1960s, we must also consider the changes that have taken place since then. In the United States, for example, the rate of clinical dissection fell from 41% in 1964 to below 5% in 1999; Switzerland witnessed a decline from 55% in 1950 to 20% in 2002. And in Austria, after the peak of 99.5% seen in 1970, only 33% of all corpses were dissected in 1993. In the former GDR numbers fell from 30% in 1979 to 18% in 1987, while in United Germany they amounted to a mere 3.1%, in 1999 and have fallen since.[35]

The decline in the numbers of clinical dissections constitutes a startling phenomenon; against the backdrop of the debate on the changing role of death, it becomes an even more challenging question. Clinical dissection, which used to form part and parcel of modern medicine and modernity itself, is now declining to such a degree that some authors predict the "death of the autopsy."[36] Why, we must ask ourselves, has the rate of

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[32] Groß, *Die Entwicklung* (cit. note 2), p. 24.

[33] Claudia Brugger and Hermann Kühn, *Sektion der menschlichen Leiche. Zur Entwicklung des Obduktionswesens aus medizinischer und rechtlicher Sicht* (Stuttgart: Enke, 1999), p. 101.

[34] Bereaved persons have the right to care for the corpse, which includes various duties. In addition, there have been landmark court decisions supporting the notion that clinical dissection is not possible without their consent.

[35] The numbers are drawn from http://www.bundesaerztekammer.de/downloads/AutLang.pdf and Groß, *Die Entwicklung* (cit. note 2), pp. 78-83. It must be added that the German Federal Association of Pathologists affirms a dissection rate of 4.5% in 2004, down from 9.6% in 1979. Some clinics claim a dissection rate of up to 50%. Ernst-Wilhelm Schwarze and Jörg Pawlitschko, "Gründe für den Rückgang der Obduktionszahlen und deren Folgen," *Deutsches Ärzteblatt*, 2003, *100,* 43, 1: 2802/B-2336/C-2191.

[36] Groß, *Die Entscheidung* (cit. note 2), p. 70.

dissections fallen, and fallen so precipitously? And is this decline any way indicative of either the repression of death or its postmodern revival?

Towards an Explanation of the Decline in Clinical Dissections

One possible way to answer this question is to assume that the actors concerned are increasingly distancing themselves from the dead body.[37] That is to say, the decline is the result of an increasing repression of death, in which case the dead bodies may be considered not only as "taboo" for the bereaved, but also as exempt from the medical system. In order to test this hypothesis, we conducted a survey among more than 1,000 adult Germans.[38] In the

Table 2. Interviewees in favor of clinical dissections[39]

In favor of clinical dissections?	Yes	No
Total	84%	10%
Northern Germany	82%	11%
Central Germany	88%	6%
Southern Germany	80%	12%
Eastern Germany	80%	14%
Men	87%	7%
Women	81	13
18-29 years	88	9
30-44 years	82	11
45-59 years	86	9
60 + years	80	12
Elementary school	78	13
Middle School	88	8
High School, University	87	9
Protestant	79	12
Catholic	87	9
No confession	89	8

[37] In some cases, people entering hospital are asked if they would consent to a possible future dissection; in most cases, however, it is the bereaved relatives and friends who asked to decide on this question.

[38] More detailed numbers can be found in Antje Kahl, "Das Trajekt der Obduktion," in *Der Tod, der tote Körper und die klinische Sektion*, edited by Hubert Knoblauch, Andrea Esser, Dominik Groß, Brigitte Tag and Antje Kahl (Berlin: Duncker & Humblot), pp. 89-108.

[39] Antje Kahl, "Klinische Sektionen: Umfrage zeigt allgemeine Zustimmung," *Deutsches Ärzteblatt*, 2010, *107*, 50: 2492-3; Ead., "Die Einstellung der Bevölkerung zur klinischen

survey we asked a number of questions concerning dissections. The following table shows the responses to the question as to whether the respondents favored or opposed clinic dissections.

As was to be expected, there were quite a variety of attitudes with regard to clinical dissections. Catholics were much more likely to consent to dissections than Protestants (which at least superficially seems surprising, because Catholics would be expected to cling to the belief in bodily resurrection). Age made a difference, as consent increased with age, and higher education also seemed to favor consent to clinical dissections. As the table shows, the different variables had some influence on the attitude towards dissections. Yet the most surprising result of the survey was the positive attitude overall. More than 84% of those interviewed were in favor of dissections and only 10% were opposed. Given the rapid decline to a rate of less than 3% for clinical dissections performed in Germany, these numbers were unexpected. In the face of the continuous decline in actual dissections, it was even more startling to observe that the numbers of persons in favor of clinical dissections are rising; by comparison, in 1973 only some 64% of respondents answered positively to a similar question.[40] Instead of a decline, we observed in fact an increase in consent to clinical dissection.

Of course, the numbers in favor of clinical dissection need to be qualified. A person who expresses a positive attitude towards dissection may not give his or her consent when actually confronted with the problem in real life. In the survey we found in fact that the consent rate varied depending on the relationship between those involved. While 72% said that they would grant consent for the clinical dissection of their own bodies, 67% would consent to their parents' or partners' corpses being dissected, 65% would consent to the dissection of a brother or sister, and 63% to the dissection of one of their own children.

Obviously, one's relationship with the person to be dissected will have an effect on one's willingness to allow a clinical dissection. Interviewees were less likely to grant consent when speaking from a first or second person perspective, i.e. with regard to themselves or significant others. Yet even these numbers were surprisingly high; if we consider those who were prepared to allow themselves, or their partners, or their children to be dissected, the percentage in each of these groups exceeded 60%. Therefore, one can hardly argue that the decrease in clinical dissections is due to a declining acceptance of the procedure among the public. In other words,

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Sektion. Ergebnisse einer repräsentativen Bevölkerungsbefragung," *Der Pathologe*, 2011, *32*: 345-348.

[40] Brugger and Kühn, *Sektion* (cit. note 33), p. 119.

the decline in the rate of dissections performed cannot be seen as an argument in support of the modernist thesis that there is a tabooing of death. But how, then, can we explain the decline in clinical dissections?

In our search for an answer we can find some hints in the data. We asked those surveyed whether they had ever actually found themselves a situation where they had to decide whether or not to give their consent to a clinical dissection. Forty-five percent said that they had lost a relative in hospital, but among these only 9% were asked by the hospital if they would agree to a clinical dissection. The fact that 5% consented and 4% declined could show that there is a difference between the response to a hypothetical question and how one will react in a real-life situation. In quantitative terms, however, it is much more significant that the number of persons asked was conspicuously low. This low number gives a clue as to the possible alternative explanation for the decline in clinical dissections. Since the majority of persons who lose a person in hospital are not even asked if they will consent to a dissection (where dissections require consent), it seems that the decision whether or not to perform dissections is determined much more within and by the medical system than by the persons concerned. This is supported by Kahl's finding that the informational conversation legally required in Germany in order for doctors to obtain consent from patients or relatives rarely takes place, does not even form part of the medical education and therefore, despite its legal importance, has hardly been formally instituted.[41]

These observations lead us to the alternative explanation that, rather than being a consequence of the repression of death, the decline in clinical dissections is the result of a transformation in the medical system. This is not so much a transformation occurring in the ideology and legitimization of medicine. In fact, the legitimacy of the study of pathology and clinical dissection is still very much defended. Clinical dissection continues to be seen as the basis for obtaining knowledge about the course of diseases and the causes of death. This legitimization is supported by studies demonstrating that autopsies limited to an external examination of the corpses are deficient in up to 50% of cases, resulting not only in misleading diagnoses on death certificates but also to distortions in statistics regarding death and, consequently, in epidemiological data and predictions.[42]

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[41] Kahl, *Das Trajekt der Obduktion* (cit. note 38).

[42] Groß, *Die Entwicklung* (cit. note 2), p. 66. This tendency is supported by a Swiss study, even if here only 10% of the results differed from the pathologists' diagnoses. Ursula

Because such data is crucial, providing the grounds for the distribution of funding throughout the health system, the decline in clinical dissections could be regarded as a major issue for the health care system.

Despite the continuing importance of dissections, including their legitimizing functions, there are additional reasons and evidence to support the assumption that the decline in clinical dissections stems from the medical system itself. To begin with, there are economic disincentives to perform clinical dissections, in that the compensation allowed to hospitals barely covers the costs. This weak economic support is mirrored in the low social status of the autopsy in medicine and the reluctance of medical students to engage in dissections.[43] In addition, the emotional resistance is growing since dissecting often triggers feelings of shame in medical doctors. They feel that they are violating the boundaries of the body and therefore of the person, and must respond with new kinds of rituals.[44]

From the perspective of the history and sociology of knowledge, however, the most important reason for the decline in dissections is the replacement of invasive manipulations of the body by new forms of technologically acquired visual information. Therefore, while it is true that the "medical gaze" obtained by cutting into the body was a constitutive factor of modern medicine, the ongoing changes in the medical gaze are certainly reducing the importance of clinical dissections. These changes are also tied to the rise of evidence-based medicine, revolutionary advances in visualization technologies, and new biopsy methods. By means of these technologies, bodies no longer need to be manipulated *in toto*. Rather, medical manipulation can focus on the specific parts of the body; new biopsy techniques rely on the use of microscopic particles which turn body parts into a *pars pro toto*. At the same time visual technologies have resulted in the transformation of medical practices which, instead of manipulating the body, work increasingly on visual representations of body parts. "Computer-assisted medical imaging technologies [...] have created a visuality in which the human body seems to have lost its materiality and become a visual

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Streckeisen, *Die Medizin und der Tod. Über berufliche Strategien zwischen Klinik und Pathologie* (Opladen: Westdeutscher Verlag, 2001).

[43] Streckeisen, *Die Medizin* (cit. note 42); Anna Bergmann, "Labor und Bühne: Medizinischer Erkenntnisforschritt im Anatomischen Theater," in *Grenzen des Lebens*, edited by Sigrid Graumann and Katrin Grüber (Münster-Hamburg-London: LIT, 2007), pp. 47-74.

[44] Streckeisen, *Die Medizin* (cit. note 42) pp. 232 ff.

medium."[45] The effects of this transformation have led to the replacement of morphology by immunology, bacteriology and molecular genetics, while the craftsmanship involved in clinical dissections has been substituted by advanced diagnostic techniques, resulting in the elimination of dissection from the medical curriculum, and reliance on the visualization of the interior of corpses automatically, as in the new technology of "Virtopsy."

The use of endoscopic instruments and the extension of visual technologies mean that the medical gaze need no longer intrude violently into the body. Instead, the body is transformed into a visual surface. In the place of synaesthetic interpretations of haptic or olfactoric aspects, medicine

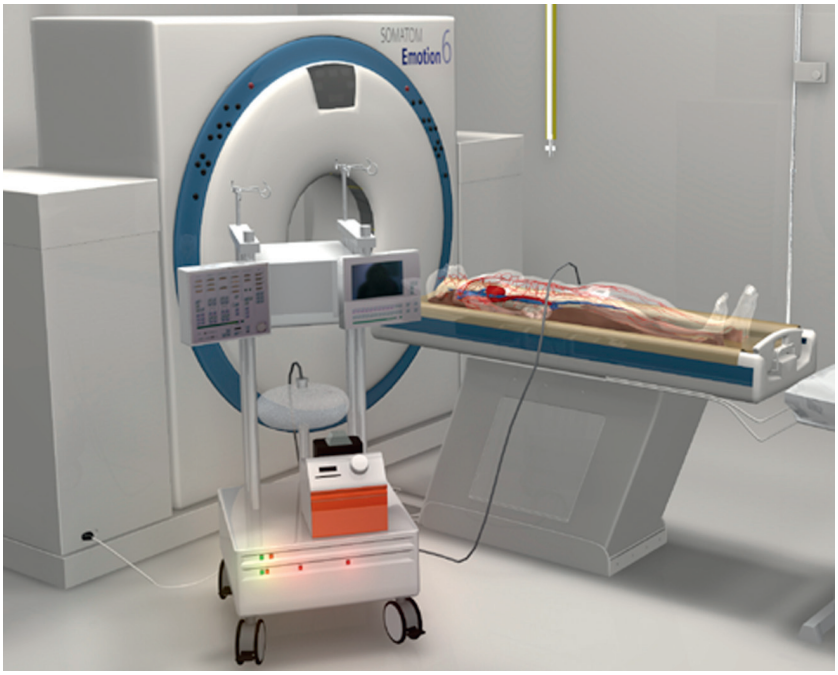

Figure 1. Virtopsy. www.virtopsy.com.

[45] Amit Prasad, "Making Images/ Making Bodies: Visibilizing and Disciplining Through Magnetic Resonance Imagining (MRI)," *Science, Technology and Human Values*, 2005, *30,* 2: 291-316, p. 291.

produces visualized virtual bodies which follow many of the conventions of technical display.[46]

The effects of these changes on the practice of clinical dissection within the medical system are obvious. As early as 1971 in the United States, clinical dissection was cancelled from the set of services that hospitals had to provide in order to receive accreditation as teaching facilities. The dissection rate in the USA, which was 41% in 1961, dropped to a mere 5-10% in the 1990s.[47] And even if the study of pathology still exists, its profile has shifted fundamentally. In 1981 more than 70-80% of the work of pathologists was devoted to diagnostic–bioptic evaluations of living patients; in 2006 only 1% of the clinical pathologist's work was dedicated to clinical dissections.[48]

Thus, the decline in clinical dissections is not only caused by the medical system. Just as clinical dissection was one of the practices that helped to bring about the paradigm shift to modern medicine, the decline in clinical dissections could also be indicative of a new paradigm shift, a new "medical gaze" which no longer requires intrusion into the dead body.

The Popular Culture of Death

We began this article by asking what might be the reasons for the decline in dissections in recent decades. This question cannot be considered in isolation; rather, the issue of how corpses are treated is directly and intimately linked to the more encompassing problem of how death is treated in contemporary society.

Broadly speaking, there are two major views on this issue. While one camp claims that death has been repressed, expatriated or rendered taboo in modern society, the other camp argues that a fundamental transformation has taken place towards what I have called a "culture of death." Since the decline in clinical dissection seems to mirror a growing reluctance to

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[46] Cf. José van Dijck, "Bodies Without Borders: The Endoscopic Gaze," *International Journal of Cultural Studies*, 2001, *4*: 219-237; this virtual body has indeed been online since 1994 (as a female since 1995): (www.nlm.nih.gov/research/visible/visible_human.html.

[47] Cf. Stefan Timmermans, "Retreat of the Autopsy," in *Der Tod, der tote Körper* (cit. note 38), pp. 127-135.

[48] Christoph Schweikardt and Dominik Groß, "Die Realität des Todes. Eine thematische Einführung," in *Die Realität des Todes,* edited by Christoph Schweikardt and Dominik Groß (Frankfurt am Main: Suhrkamp, 2011) p. 9-18.

deal with death because it involves violating the integrity of the dead person's body, one may be tempted to interpret this as an evidence for the repression thesis. However, as our survey has shown, the steep decline in clinical dissection is not due to a declining acceptance of dissections within the population. On the contrary, clinical dissections are more widely accepted than ever, and the majority of people are prepared to give their consent to the dissection even of their significant others. Therefore, an explanation for the fact that only a tiny proportion of the dead are subject to clinical dissection must be found in the medical system itself. Although dissection was a paradigmatic practice in early modern medicine, its practical relevance to the medical system is rapidly decreasing, and we may venture to infer that the changing status of dissections is linked to a profound paradigm shift in medicine which, it appears, no longer requires the dead body and its dissection.

And yet the structural replacement in the medical field of the dead body by high-tech visual images has not witnessed a corresponding replacement or even repression of dead bodies from the minds and actions of people outside the medical system. It seems rather that the dead body and death have been shifted to other sectors of society. The fact that the majority of people would allow their closest relatives to be dissected reflects not only the increased acceptance of death. It is also indicative of an increasing popularity of the dead body and death in general outside the medical system. By the 'popularity' of death, I mean that death has become a topic of discussion for a massively growing portion of the population, its themes more widely communicated and accepted, and they are framed in the forms of communication of popular culture rather than in the codes of professional experts (physicians, theologians, etc.).

This transformation can be observed with respect to dissections. Indeed, while the number of clinical dissections performed has declined, other forms of dissections have become popular. Take, for example, the sudden eruption of dead bodies and forensic dissections on television in the last ten or fifteen years. As Tina Weber has demonstrated with a detailed analysis of American and German television shows, there are specific formats dedicated to dissection (in this case, forensic dissection) which place dead bodies at the very centre of attention.[49]

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[49] Tina Weber, *Drop Dead Gorgeous. Representations of Corpses in American TV Shows* (Frankfurt am Main: Campus, 2011).

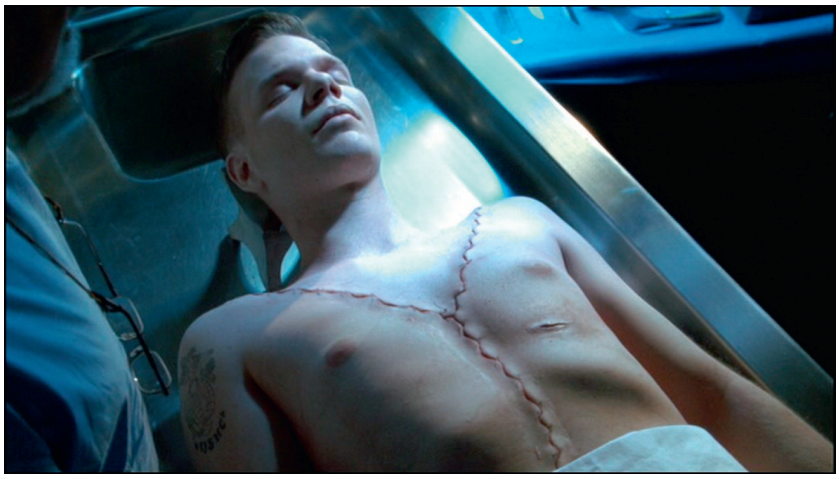

Figure 2. *CSI* – Dead body in pathology (Episode 703).

This increased popularity is not restricted to the mass media. Anatomical institutes also report an excessive offer of bodies for dissection by the general population. In Germany, more than 80,000 individuals have signed a contract with anatomical institutes.[50] The relevance of dissected bodies is also mirrored in the sensational success of von Hagen and his plastinated bodies, which caused hardly a reaction in terms of taboos, even though the exhibit has been designed to appeal to popular taste.[51]

Thus, if we can take the changing role of dissections as indicative, the role of death in contemporary society has undergone a fundamental transformation. While death or, to be more precise, dead bodies are losing their relevance to the medical system (possibly also due to the redefinition of death as 'brain death'), the subject is becoming popular among the general public. As stressed in Knoblauch (2009), popularity does not only mean a broader diffusion. It also means an adaptation to the popular forms and

[50] Dominik Groß and Martina Ziefle, "Im Dienst der Unsterblichkeit? Der eigene Leichnam als Mittel zum Zweck," in *Objekt Leiche*, edited by Dominik and Julia Grande (Frankfurt am Main: Campus, 2010), pp. 545-582, p. 559.

[51] Thus Walter observes somewhat surprisingly that "no visitors write of being disturbed by the exhibition's technical innovation." Tony Walter, "Plastination for Display: A New Way to Dispose of the Dead," *Journal of the Royal Anthropological Institute*, 2004, n. s., *10*: 603-627, p. 621.

genres of communication and aesthetic style, so that popularity, instead of implying an increased familiarity and intimacy, has become rather a public code which, in a matter of speaking, favours the perspective of the "third person" set at something of a distance from the first person.[52]

The popularity of dissection can be seen as embedded in the wider landscape of a growing culture of death. Ranging from palliative medicine to the hospice movement, from the "Death Consciousness Movement" to the most diverse new forms of burial and grieving,[53] we seem to be witnessing a fundamental change in the role of death. The decline of the clinical dissection, at least, seems to support this view.

[52] The distinction between the two perspectives is essential to reach an understanding of the recent transformation of death. It is basic to our research project, and its fundamentals can be found in Alfred Schutz and Thomas Luckmann, *Structures of the Life World* (Evanston: Northwestern University Press, 1984).

[53] Another series of examples illustrating the popularity of death is presented in Knoblauch, *Populäre Religion* (cit. note 19).