



---

Suicide Determination and the Professional Authority of Medical Examiners

Author(s): Stefan Timmermans

Source: *American Sociological Review*, Vol. 70, No. 2 (Apr., 2005), pp. 311-333

Published by: [American Sociological Association](#)

Stable URL: <http://www.jstor.org/stable/4145372>

Accessed: 30/12/2013 19:00

---

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at  
<http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



American Sociological Association is collaborating with JSTOR to digitize, preserve and extend access to *American Sociological Review*.

<http://www.jstor.org>

# Suicide Determination and the Professional Authority of Medical Examiners

Stefan Timmermans

Brandeis University

Harvard University

*Since Durkheim's pioneering study, official suicide statistics have been suspected of underreporting the true suicide rate. A majority of researchers asserts that mistakes are minimal and not systematic while a minority claims that suicide statistics are systematically biased. Lingering uncertainties about suicide rate accuracy call into question the claims of scholarship and the efficacy of prevention programs. From the perspective of the sociology of professions, the critique of suicide accuracy challenges the professional authority of death investigators. Ethnographic observations show that medical examiners tend to underclassify suicides because the suicide classification requires positive proof of suicidal intent and because false negatives do not challenge the authority of medical examiners as much as false positives. Sufficient proof for suicide results from medical examiners' privileging of pathological evidence, the legal threshold to interpret evidence, and close relationships with law enforcement and clinicians. The same professional characteristics that safeguard forensic authority result in suicide underreporting: medical examiners protect their authority by determining suicide conservatively. Relatives acting to avoid the stigma of suicide and public health officials concerned with underreporting have a marginal influence on suicide determinations. This article contributes to the sociology of professions literature by analyzing how a professional group maintains authority in spite of profound criticism from outside parties.*

Noting that in 1996 suicide was the ninth leading cause of death overall and the third leading cause of young people age 15–24, the U.S. surgeon general, David Satcher, in 1999 issued a call to action to prevent suicide. The surgeon general observed, “It is generally agreed that not all deaths that are suicides are reported as such.” The action plan included a recommendation to enhance the suicide-monitoring system and institute uniform suicide terminology (U.S. Public Health Service 1999:4). A

2002 Institute of Medicine report on reducing suicides also qualified its findings with the statement that “official suicide statistics are fraught with inaccuracies. Under-reporting limits their strength.” (Goldsmith et al. 2002:55). The general agreement that official suicide statistics underreport self-inflicted deaths harks back at least a century, to Emile Durkheim's pioneering study. Durkheim was aware that official statistics might be less than completely accurate but considered the overall suicide rate sufficiently proximate for his analysis ([1897] 1979:146–50).

This article offers a new perspective on the century-old question of suicide accuracy by analyzing the problem from the perspective of the sociology of professions. The classification of suicide is delegated to death investigators, who take jurisdiction of the corpse and conduct a medicolegal investigation to determine the

---

Direct all correspondence to Stefan Timmermans, Sociology Department, MS 071, Brandeis University, Waltham, MA 02454-9110 (Timmermans@brandeis.edu). The author thanks Peter Conrad, David Cunningham, Bernice Pescosolido, Jerry A. Jacobs, Debra Osnowitz, and anonymous reviewers for comments on earlier versions of this paper.

AMERICAN SOCIOLOGICAL REVIEW, 2005, VOL. 70 (April:311–333)

cause and manner of death. In the past decades, death investigation has undergone rapid professionalization in some jurisdictions. Instead of coroners with limited training, medical examiners certified as forensic pathologists increasingly conduct death investigations. Drawing from ethnographic observations in a medical examiner's office, I analyze whether the increased professionalization of death investigation has rendered suicide determination less equivocal and explore why the problem of suicide accuracy has persisted in spite of long-standing criticism.

The literature on suicide accuracy divides into two camps: a minority position argues that suicide determination is biased; a majority view states that while suicide might be underreported, the data are sufficiently accurate. Following Kitsuse and Cicourel's (1963) critique of sociologists' reliance on statistics, Douglas (1967:ch. 12) claimed that suicide statistics are systematically flawed. He argued that the notion of "suicide" in mortality statistics reflects government bureaucracies' definition of suicide, revealing assumptions in the process of gathering data but not necessarily the phenomenon of suicide itself. Douglas envisioned a social science that would map the meanings of suicide within the life world of the deceased, look for interpretive patterns, and relate those patterns to broader cultural values.

The majority perspective, that suicide is underreported yet reporting is unbiased, is reflected in the search for "hidden" suicides in other death classifications: single-vehicle accidents, pedestrian deaths, natural deaths, accidental poisonings, drownings, and undetermined deaths. This literature also analyzes specific demographic groups more likely to be misclassified: African Americans, Native Americans, women, adolescents, and the elderly (for a review, see Phillips and Ruth 1993). Most of these studies confirm underreporting; estimates vary between 1 and 99 percent (O'Carroll 1989; Phillips and Ruth 1993). Some researchers, however, claim that underreporting might be somewhat compensated for by overcounting suicide in specific modes of death, such as prescription drug overdoses (Jonasson, Jonasson, and Saldeen 1999). Despite this extensive literature, most sociologists and social epidemiologists have concluded that suicide underreporting is randomly distributed and min-

imal and that mortality figures are sufficiently accurate for statistical analysis (Pescosolido and Mendelsohn 1986). Other researchers, however, warn that complacent use of official mortality rates might skew research findings (Phillips and Ruth 1993), particularly in international or historical comparisons.

The lingering uncertainties regarding the accuracy of official suicide rates challenge any study that reports controversial results. For example, comparative researchers attributed the increases in Irish suicide rates over the past three decades, as compared to neighboring Britain, to more accurate reporting (Cantor, Leenaars, and Lester 1997). Their analysis drew a sharp rebuke from Irish researchers arguing that the increase in suicide rates was "genuine"—due to demographic and social changes—and that Irish suicide rates were actually more accurate than the rates in England and Wales (Kelleher, Corcoran, and Keeley 1997:17). Similar controversies have challenged the correlation between suicide and Scandinavian child-rearing practices (Hendin 1964; Wekstein 1979) and the relatively low suicide rates of African Americans and women (Phillips and Ruth 1993). As the surgeon general's call to action indicates, the consequences of inadequate suicide statistics percolate through the public health system, providing a weak basis for the formulation, implementation, and evaluation of suicide prevention initiatives.

Researchers generally offer three reasons for possible inaccuracies: (1) the equivocality of suicide; (2) legal, administrative, and procedural variations across locales; and (3) pressures of relatives to avoid stigma. The equivocality of suicide has been identified through vignette studies documenting the variability of death classification, in which deaths that might have the characteristics of suicide generate the greatest variability (Bloor 1991; Hanzlick and Goodin 1997). Several studies have found negligible the effects of changes in administrative, legal, and procedural guidelines and the background of death investigators on the accuracy of suicide reporting (deJong and Hanzlick 2000; Neeleman and Wessely 1997), but other studies have hypothesized that these factors must have an explanatory role (Jobes, Berman, and Josselson 1987). Although researchers have claimed for more than a century that relatives influence death investigators, no one has doc-

umented, beyond anecdotal accounts, whether and how relatives achieve this effect (O'Carroll 1989). The presumption is that relatives either conceal evidence or pressure death investigators to classify a death differently, to avoid the social, religious, legal, or financial stigma (Massello III 1985).

In spite of the emphasis on suicide certification practices as the cause and potential solution for suicide inaccuracy, few studies have documented how suicides are actually determined in practice, and the available studies fail to cover recently professionalized death investigators. In the most comprehensive study, Atkinson (1971; 1978) researched how British coroners determine suicide, by reviewing their records and observing their decision-making. He argued that some deaths are obviously suicides, but others are unlikely to be designated as such. During the inquest, Atkinson found, the coroner focused on cues in the deceased's biography and the hours preceding death to render suicide more likely. Atkinson's analysis highlighted coroners' ordering of evidence according to taken-for-granted assumptions of a typical suicide (see also Garfinkel 1967). Atkinson, however, did not link his findings back to the issue of suicide inaccuracy but, in response to Douglas, emphasized that a study of the social meanings of suicide should not ignore the work of official death investigators.

In this study, I follow Atkinson's lead to investigate suicide from the perspective of death investigators to understand how these key professionals decide the official suicide record. Atkinson's observations of coroners also form a baseline to compare medical examiners' suicide determinations. Unlike Atkinson, I explore the implications of professionalized death investigation for suicide accuracy by focusing on the potential reasons for inaccuracy by addressing how outside parties—relatives and public health interests—impact the determination of suicide and how medical examiners resolve suicide's equivocality. Also in contrast to Atkinson, I regard the problem of suicide accuracy foremost as a professional challenge. From the vantage point of death investigators, forensic investigations do not only constitute the raw material of suicide statistics but also reflect a profession's authority to classify and explain suspicious deaths.

### ***SUICIDE AND PROFESSIONAL AUTHORITY***

From the perspective of sociology of professions, the allegation of suicide inaccuracy challenges the authority of a professional group. The charges of inaccuracy presume scientific incompetence, inconsistency, and a preoccupation with private rather than public needs. At stake for professionals is not simply the accuracy of their determinations but the criticism that they are unfit to do their jobs. For suicide investigators, professional authority resides in the ability to present death investigations as accurate and valid and shape the cultural understanding of suicide (Starr 1982). Professionals aim to acquire jurisdiction over a contested area of expertise (Abbott 1988; Halpern 1992; Light 2000). Over the past decades, some observers noted that the powerful position of medical professionals has been challenged: physicians have lost legitimacy, authority, autonomy, and public confidence (for reviews, see Light 2000; Schlesinger 2002). Others, however, have argued that the core of professionalism has remained intact (Freidson 1994). These theories offer two alternative perspectives for understanding the persistence of suicide underreporting in spite of criticism.

The notion that charges of suicide inaccuracy weaken the professional authority of death investigators is in line with the theory of countervailing powers formulated to explain the overall decline of the medical profession at the end of the twentieth century (Light 2000). According to this theory, the dominance of one group in the health care field causes others to redress the "excessive" power base of the dominator. Health care thus takes place in a market of "interdependent yet distinct" (Light 1995) parties vying for resources, favorable public opinion, market share, and control. Within the theory of countervailing powers, the lack of suicide accuracy might instigate a counter-reaction in which the general public or public health scientists contest the official suicide record and structurally limit the authority of death investigators. Among the factors that Light (2000:204) lists as leading to change, the most likely one to limit professional authority seems to be the ignoring of concerns of clients and institutional partners.

Freidson (1970, 1994), in contrast, maintains that although professional decline might be occurring, the core of medical professionalism

has remained resilient because professionals still maintain autonomy over the content of their work. Professionals, according to Freidson, distinguish themselves from other occupations by the special character of the knowledge required to perform their tasks. Professional credentialing systems provide a market shelter and independence from government oversight. A consolidated professional status offers control and discretion over work: "their modes of formulating and interpreting events permeate both popular consciousness and official policy" (Freidson 1994:33). Freidson (1994) dismisses the importance of organizational change and third-party incursions on professional power because these parties have been unable to dictate how professionals perform their work. From this perspective, a consolidated professional monopoly should prevent charges of suicide underreporting from undermining authority.

The sociology of professions offers a theoretical framework for understanding suicide determinations from the perspective of the gatekeepers of mortality statistics and, consequently, to elucidate the uncertainties that have plagued the suicide literature. Light predicts that dissatisfied third parties will curtail professional autonomy at the worksite, but Freidson suggests that professions can maintain occupational dominance consolidated in a market shelter. If professionals remain in charge of death investigation, they maintain the prerogative to set work standards in their local jurisdiction, and suicide determinations might vary. If outsiders determine work practices, death investigators turn into technical specialists providing evidence for others to interpret; losing autonomy and professional authority. The key issue to consider when evaluating suicide accuracy is the control of professionals over the content of their work. The grounds for the professional authority of suicide determination depend on (1) whether death investigators can classify deaths according to their professional standards, (2) who constitutes the audiences of their determinations, and (3) what impact these audiences—particularly relatives and public health officials—have on the detection of suicide.

After reviewing the basics of the U.S. death investigation system and the methodology of this study, I will show how medical examiners address the equivocality of suicide, deal with the

stigma of suicide, and manage pressure of relatives and public health officials on their decision-making. These findings address the effects of increased professionalization of death investigation and the consequences of persistent suicide accuracy criticism by outsiders on forensic investigations. In addition, the determination of suicide by professional death investigators evaluates the predictive strength of Light's and Freidson's theories of professional power.

## THE JURISDICTION OF MEDICAL EXAMINERS

In recent decades, the U. S. death investigation system has undergone structural changes to strengthen the professional status of death investigators. From the seventeenth century, coroners in Anglo-Saxon countries have conducted death inquests. Coroners convened juries of lay people to issue verdicts about the cause and manner of death. They heard evidence, interrogated witnesses and relatives, and rendered verdicts based on expert testimony—including the testimony of pathologists (Anderson 1987; Burney 2000). In many areas of the United States, a coroner was elected and so had to consider keeping the electorate happy (Lebrun 1962). After Progressive Era reports of widespread corruption and political favoritism in coroners' offices, an American reform movement to replace coroners by medical examiners promised a stronger scientific base for death investigations (Johnson-McGrath 1995). Medical examiners are physicians, usually board-certified forensic pathologists, who conduct a scene investigation, autopsy, and laboratory tests to determine the cause and manner of death. The manner of death includes one of five categories: natural death, accident, homicide, suicide, or undetermined. After the Model Postmortem Examinations Act was published in 1954, 22 states changed to a medical examiner's system; 11 states still have coroner's systems; and the rest have mixed systems (Hanzlick 2003).

Medical examiners who are trained as forensic pathologists constitute the most professionalized group of death investigators. Professions have sociologically been distinguished from other occupations by their orientation to public service through the application of specialized knowledge and complex skills (Leicht and Fennell 1997). Medical examiners and coro-



ners have a legal mandate to investigate well-defined instances of unexpected, violent, and suspicious death, and they fulfill a cultural need by detecting, classifying, and explaining such deaths. Medical examiners differ from their competitors in their claim for superior knowledge based on scientific expertise. Forensic pathologists are trained and certified in multiple nonmedical sciences as well as traditional medicine; they have a working knowledge of toxicology, firearms examination, trace evidence, forensic serology, and DNA technology. Rather than relying on expert witnesses, their decisions are informed by evidence gathered first-hand in postmortem investigations. Medical examiners promise to bring medically and scientifically validated skills to the job, to increase the objectivity of death investigation. The rise in expertise, however, does not necessarily produce more accurate suicide data. Suicide determinations will depend on the compatibility of pathological evidence with suicide criteria. Importantly, the exercise of scientific judgment in suicide determination relates to medical examiners' professional autonomy.

## METHODOLOGY

This study is based on ethnographic research in a medical examiner's office over a three-year period. This office is responsible for the certification of suspicious deaths in a geographical territory in the United States with a population of about one million residents living in an expanding urban area with adjoining suburban and rural communities. The office employs six scene investigators, three pathology assistants, four full-time forensic pathologists, and administrative staff. After guaranteeing confidentiality and anonymity, I had full access to the investigative files, morning meetings, and autopsies. I mainly observed alongside the forensic pathologists, but I was often asked to take pictures during an autopsy, help describe the personal effects of the deceased, and hand tools to pathologists. During autopsies, I took notes on a clipboard and transcribed them into full field notes at the end of the day. I also conducted numerous interviews with the staff and visiting pathologists. All data were analyzed systematically using the principles of grounded theory to uncover the social processes of phenomena and to follow their interactional and organiza-

tional consequences. Data analysis proceeded in a sequence, starting with open coding, where data elements were labeled and categorized, and followed by axial coding aimed at linking emerging concepts, and selective coding centered on key concepts (Strauss 1987). I observed 225 autopsies: 28 of these deaths were classified as suicides, and five cases were explicitly considered suicides during the investigation but were eventually classified otherwise. I also reviewed files of an additional 70 deaths classified as suicides. Because I am here interested in the process of suicide classification, including deaths classified differently, I rely mainly on observations.

Access to a medical examiner's office for sociological research is not easy (for similar problems, see Atkinson 1978:ch. 5). As public officials whose budgets depend on state, district, or county funding, medical examiners are wary of outsiders and fear misrepresentation and breaches of confidentiality. The office where I conducted my research agreed to my presence on condition that I observe a strict confidentiality protocol: all names of staff and deceased are pseudonyms, and identifying characteristics have been changed. To make sure that I did not even inadvertently breach confidentiality, the medicolegal administrator and chief medical examiner at my research site requested to read over all papers prior to submitting them for publication. Besides confidentiality, their comments addressed the accuracy of pathological descriptions but did not engage with the sociological focus of the paper. The institutional review board of Brandeis University approved this project.

The office where I conducted my research reflects the "gold standard" of death investigation: "a highly professional, well-endowed, medical examiner office with access to all necessary technical expertise" (Bonnie 2003:63). While financial resources and personnel were inevitably constrained, the medical examiners in my study resisted pressures to speed up determinations and preferred to have a backlog of months rather than certify a death based on sloppy or incomplete forensic research. In terms of the generalizability of my findings, a focus on a highly functional medical examiner's office staffed with forensic pathologists offers the most favorable examination of the operation of professional authority vested in scientific skills.

At the other end of the professional continuum are the offices of coroners studied by Atkinson in which the administrative decision-maker might evaluate but does not engage in forensic research. These two institutional settings indicate the range of professional variability of suicide classification (see Hanzlick 2003; Pescosolido and Mendelsohn 1986).

THE EQUIVOCALITY OF SUICIDE

How do medical examiners recognize suicide in a corpse? I address this question in two parts: first, I explain that the equivocality of suicide is mainly a problem of locating suicidal intent posthumously. This is not problematic in routine suicides and does not become an issue in routine non-suicides. A suicide is only routine, however, in light of the professional prerogative to gather certain kinds of evidence. In routine suicides and more equivocal deaths, medical examiners apply a probabilistic decision-making rule to satisfy their evidentiary standard. Secondly, I address how relatives and public health officials might influence suicides by locating these external parties in the organizational ecology of death investigation and by discussing how medical examiners address the stigma of suicide.

THE PROBLEM OF SUICIDAL INTENT

The U.S. Centers for Disease Control and Prevention (CDC) circulates Operational Criteria for Determination of Suicide, specifically geared at medical examiners and coroners (Rosenberg et al. 1988). To classify a death as a suicide, the death investigator needs to establish that the death is *self-inflicted* and *intentional*. The first criterion is ascertained from autopsy findings, witness reports, toxicology, and scene information, even though bodies rarely reveal conclusively how injuries were caused. The second criterion poses even more problems. Intentionality can be established from verbal or nonverbal expressions of a wish to kill oneself, or it can be inferred from implicit evidence, including preparations for death, signs of farewell, expressions of hopelessness or great physical pain, previous suicide attempts, precautions to avoid rescue, and serious mental disorder. According to medical examiners, the heavy weight of intentionality renders the criteria inoperable because the death investigator

must “second-guess” the deceased’s mind (Goodin and Hanzlick 1997), inviting rather than resolving ambiguity (Garfinkel 1967:174). To further complicate the matter, last-second changes of intent are common in suicides (Shneidman 1996).

To determine conclusively whether suicide was the intended outcome, the death investigator would need to cross-examine the deceased. Because this is impossible, the investigation needs to establish suicidal intent from secondary evidence. As Atkinson (1978) noted, one source of secondary evidence is not definitive. Rather, different pieces of evidence need to be triangulated. Generally, medical examiners provide support for suicide from seven different sources (see Table 1).

- 1. *Witness reports.* The most direct indication of suicide is several independent witness reports. The best example is a man jumping from a bridge after a police officer tried to talk him out of it. Suicides, however, are usually solitary acts. Only occasionally do people have the misfortune to witness. For example, girlfriends and wives of several men in my study witnessed self-inflicted shootings.
- 2. *Suicide notes.* Suicide notes are the second most direct indication of intent. Only 20 to 35 percent

Table 1. Evidence of Suicide in 28 Observed Cases

	Number
1. Witness Reports	3
2. Suicide Guidelines	1
3. Suicide Notes	8
5. Previous Suicide Attempts	5
4. Testimonials-Preparations	3
6. Life Crises	
Relationship	7
Work	5
Death of loved one	2
Confirmed health problems	15
Symbolic meanings	1
Crime	4
7. Mode of Dying	
Gun shot wound	10
Hanging	6
Overdose	5
Jumping	3
Drowning	1
Suffocation	1
Poisoning	1
Burning	1

Note: All cases are coded in more than one category.

of presumed suicides, however, contain notes (Shneidman and Farberow 1957). Although a suicide note might be conclusive for a suicide determination, it is insufficient by itself, and a suicide classification will need corroborating evidence such as the mode of dying and other biographical factors. Suicide notes' portability also renders them vulnerable. In the same way that drug paraphernalia tend to disappear from a crime scene, scene investigators suspect that suicide notes regularly vanish as well.

3. *Suicide guidelines.* A clear indication of suicidal intent corresponds to the suicide directions in Derek Humphry's *Final Exit* (2003). In three reviewed cases (one observed), the deceased had overdosed on similar prescription medicine and they had taped a plastic bag around their heads, as advised by Humphry. In one of these suicides, the book was found open, next to the body with the "how to" pages book marked. The pathologist merely checked for signs of struggle and for moisture in the bag to verify that the man was breathing before the bag was put over his head.
4. *Previous suicide attempts.* A history of unsuccessful suicide is also a strong indication that the death was intentional. Such history may be apparent from the medical file or from physical signs such as scars on the wrists. In many situations, however, the history depends on the accounts of relatives.
5. *Testimonials.* The fifth best witnesses are relatives and health care professionals who knew the deceased intimately and report suicide threats. These people, however, might have reasons to make the death appear not to be a suicide. Relatives and friends are presumed to be concerned not with an accurate death investigation but with preserving the best possible memory of the deceased (Hallam, Hockey, and Howarth 1999). A perpetrator might also want to suggest suicide to hide a homicide. Because relatives and friends are assumed to engage in "deliberate deception and concealment" (Johnson 1969:103), their information is considered unreliable, especially if it cannot be corroborated with medical clues.
6. *Life crises.* Pathologists look for any indication of a recent crisis. Prime suspects are relationship problems. In the case of a student who overdosed on over-the-counter sleeping pills, the medical examiner immediately asked whether she had boyfriend troubles. Next, investigators look for serious problems at work. When an investigator discovered that a dead farmer worked for a farm cooperative at which lay-offs had been occurring, this factor became a possible reason for depression. A third disruption is the death of a loved one. One man shot himself shortly after his wife died from cervical cancer and earlier that day had expressed to his parents that life had

become meaningless. Fourth, worsening chronic health problems might lead to suicide, although bad health might also indicate a natural death. When a cancer patient who had repeatedly expressed a wish to die was found dead, the pathologist wondered whether the cancer had taken its terminal course or whether the man had hastened his death. The date of the death might be symbolically meaningful, as in the case of a prisoner who hanged himself a year after his grandmother died. People might also kill themselves rather than go to prison.

7. *Mode of Dying.* Suicidal intent can also be inferred from the mode of dying or from precautions to avoid rescue. Medical examiners evaluate the mechanism of death in light of its reflection of desperation, painlessness, deadliness, aesthetics, symbolism, and cultural appropriateness. Death investigators presume that hangings, for example, are difficult to "fake" because one needs a more-or-less willing victim. Even in hangings, however, some kind of additional investigation is required. The medical examiner checks for defense wounds and sex tools around the body. Defense wounds would suggest foul play while the sex paraphernalia might indicate an accidental asphyxiation as part of sexual arousal. Other modes of death are more ambiguous. Single-gun-shot wounds to the head, the most common mode of suicide in my study, also is the most common way homicides are committed and may also occur accidentally.

### THE ROUTINE SUICIDE

In routine suicides, the evidence overwhelmingly points to suicidal intent. The police officer notifying the medical examiner's office reports a suicide, rather than a potential suicide or a suspicious death. The scene investigator in the medical examiner's office describes a likely suicide in the scene report, and the pathologists tailor their investigations to documenting a suicide, rather than determining one of several possible manners of death. An example of my field notes states,

During morning meeting, the case manager discusses a new case about a man in his mid-fifties who worked as a city worker and moonlighted as a security guard. He had guns in the home, took a .357 Smith and Wesson Magnum into his bedroom, and shot himself through the head. His three sons were playing in the backyard, and the eleven-year-old found his father and called a neighbor. The bullet entered on the left side, exited on the right, hit a head board, and was found against the wall. The man must have rolled over after being shot



because he bled largely in a basin on the floor. The fire department had moved him over. There was no note. The gun was next to his hand and did not contain any other cartridges. The man had recently experienced marital problems and had consulted a doctor for depression.

While the staff was horrified by the presence of children at such violence, the death presented little ambiguity. The chief medical examiner decided that an external inspection describing the injuries to the head would be sufficient to close this case. If X-rays had shown bullet fragments, the head would have been opened to retrieve them. If ambiguity had remained or a medical complaint had been suspected, the chief would have requested a full autopsy. In this case, however, a history of marital complaints, documentation of depression, and the planning apparent in putting only one bullet in the gun's chamber made this death a suicide. Even the disregard for his children testified to the man's desperation. The staff considered the absence of a suicide note and the movement of the body prior to the scene investigator's arrival irrelevant in light of the consensus that the man had shot himself.

Although the categories of evidence indicating suicidal intent are similar for coroners and medical examiners, it is not the evidence as such but the fit between evidence and scientific expertise that renders a suicide routine. Evidence is not predetermined and can indicate suicidal intent only if a professional perspective allows one to look for it, find it, and interpret it. The information about marital problems and clinical depression, for example, requires a scene investigator asking the right questions. Few people volunteer such information after a loved one has died. In fact, the wife of the man who shot himself in the bedroom was in shock after being informed of the death and acquiring this information required patience and sensitive interviewing skills. Even when the information is available, its relevance is not self-evident: depressed people with marital problems may also be shot by others. Only when the mode of death suggests the possibility of suicide does a life crisis gain relevance.

Because forensic pathologists aim to link the signs of the body with the circumstances of the death and personal history, their work requires an active engagement with the corpse to identify a correspondence with suicide. In the case

of the man who shot himself in the bedroom, the preliminary suicide determination was confirmed during the limited autopsy, when the pathologist found gunpowder burns on the man's hand and a blood splatter consistent with a self-inflicted gunshot wound. If the pathologist had instead discovered a second bullet or ligature marks on the wrists, the death would have been not a routine suicide but a deeply ambiguous case with some characteristics of a suicide.

Forensic pathologists excel at revealing and interpreting traumatic evidence that leaves obvious, penetrating marks on the body. Their scientific skills distinguish entrance and exit wounds, the lethality of multiple stab wounds, and the trace evidence left on a victim's clothes. These skills are highly valued in homicide investigations where the pattern might reveal how close a perpetrator stood before firing the fatal shot, whether choking or stabbing killed a victim, or what instrument was involved in death caused by blunt-force trauma. Medical examiners are able not only to interpret these injuries but also to document them in legally acceptable ways. In suicide investigations centering on the deceased's intent, however, these skills are less useful. An autopsy alone rarely provides sufficient evidence of a suicide. A study of 185 forensic cases where the medical examiner initially decided the manner of death based on an external examination showed that in only one case a later autopsy resulted in a change in the determination (Vanatta and Petty 1987). Medical examiners admit the mismatch between an autopsy and the determination of a manner of death: "All agree, however, on the fundamental premise that manner of death is circumstance-dependent, not autopsy dependent" (Hanzlick, Hunsaker III, and Davis 2002:4). Similarly, sociologists noted that "the dependence on 'hard' evidence and objective proof called for by the scientific method may actually decrease the suicide rate" (Pescosolido and Mendelsohn 1986:97).

### THE ROUTINE NON-SUICIDE

When distinctive pathological marks that correspond to the circumstances and medical history of the deceased are lacking, intentional, self-inflicted deaths might slip by. The counterpart of the routine suicide is the *routine non-suicide*: certain deaths are rarely considered

suicidal because they have all the characteristics of a natural death, a homicide, or an accident. Yet they may actually be self-inflicted. The most famous example of a suicide concealed as homicide was told in the Sherlock Holmes story "The Problem of Thor Bridge" (Doyle [1927] 1993), where a woman attaches a weight to a gun and holds it over a bridge while shooting herself. After the blast, the gun falls into the river, creating the impression that the woman was shot by a fleeting assailant. The forensic pathology literature includes several instances of suicides exactly in this manner, including one in which the gun was wrapped in a plastic bag to avoid powder residue traces on the hand (e.g., Prahlow, Long, and Barnard 1998). In this case, forensic pathologists deduced the actual cause of death after they retrieved the gun from the river.

Suicides may be easier to miss when they appear as natural deaths and lack the trauma that alerts death investigators to the possibility of suicide. Poisonings and overdoses are thus likely underreported. When alerted of a death of an elderly person with a history of chronic disease, for example, medical examiners urge attending physicians to sign the death certificate and put down a natural cause. Even if a medical history is lacking, the pathologist might avoid a postmortem investigation and indicate a natural death caused by arteriosclerotic disease. The ubiquity of coronary artery disease has rendered this condition the default cause of death for elderly people. The elderly, however, are also most likely to take their own lives: the suicide rate of white men over 65 is higher than that of any other demographic group, including teenagers (Sahyoun et al. 2001). A colleague told me that her stepfather, who was suffering from advanced cancer, arranged his own death with an overdose of medication after his wife passed away. The local medical examiner neither contacted the family nor conducted an autopsy but signed the death certificate indicating a natural cause of death. A toxicology screen might have found the higher drug levels.

The determination of routine suicide and routine non-suicide is due to the same factors: both involve corpses, professionals, triaging assumptions, standards of evidence, and organizational processes. The same professional procedures that allow some deaths to stand out make it more difficult to locate suicide in other deaths.

A routine suicide determination is routine only when it fits a professional perspective geared toward pathological evidence. In comparison to Atkinson's earlier study, medical examiners are more oriented toward medical findings than coroners who tend to rely on biographical information provided by relatives and friends during an inquest.

### *THE 51 PERCENT RULE OF A MEDICOLEGAL SUICIDE*

The question remains: how do medical examiners determine that disparate pieces of evidence amount to conclusive suicidal intent in routine suicides and more equivocal cases? As with medical examiners' creation of evidence, their decision-making in suicide is patterned for professional reasons. Medical examiners work not deductively—determining a suicide based on a checklist of evidence—but inductively, building a case for suicide from diverse pieces of evidence. The regularity of suicide determinations consists of a probabilistic decision-making process in which the evidence of the entire investigation needs to meet a suicide threshold. The decision-making rule underscores how medical examiners' scientific expertise is mediated by their roots in the dual areas of medicine and criminal justice.

The chief medical examiner in my study articulated the decision-making process in the death investigation of Guy Dubos, which had many characteristics of a suicide but was classified differently.

Guy Dubos, a white man in his late thirties, was found dead in his apartment. The scene investigator treated the case as an obvious suicide, stating that the deceased "left three suicide notes and indicated he overdosed." He had been drinking and was argumentative with his girlfriend. His girlfriend reported that Guy was jealous of one of her male coworkers. He also had recently filed for bankruptcy after a previous divorce. He was diabetic and had a white insulin pump inserted via a catheter into his lower abdomen. Near Guy's body the investigator found an empty bottle, which had contained 60 antidepressant pills, and an empty beer can.

After being notified of the death, Dubos's relatives fly into town and vehemently state that they do not believe that he caused his own death. His brother, a former defense attorney, argues that Guy's death was due to alcohol, diabetes, high blood pressure, and emotional distress. The rela-

tives dismiss the apparent suicide notes as “amateurish dabbings in poetry.” The police officer who was present at the scene and now attends the autopsy tells us that Dubos was a recovering alcoholic. Dr. Brown, who conducts the autopsy, dismisses the importance of the notes as suicide notes, adding that “Poets tend to be a morbid kind.” While I help with taking photographs, I note that cemeteries are filled with famous poets and writers who have killed themselves.

The deceased carries a medical alert bracelet indicating insulin-dependent diabetes and an allergy to penicillin. Cutting the heart, Dr. Brown observes that Dubos has a pretty good vascular system for a diabetic; there is only mild arteriosclerotic disease. The pathologist sighs, saying that it would be relatively easy for Guy to overdose on insulin. He had only to turn up his pump too high or inject himself with an extra dose. An insulin overdose is almost impossible to prove because insulin breaks down in the body postmortem and this man has been dead for four days. The autopsy does not uncover anything pathologically abnormal. At the end of the case I ask Dr. Brown what the verdict is. He answers, “Hell if I know.” The case is left pending laboratory studies. If the toxicology tests detect that Dubos overdosed on antidepressants, it will be a suicide.

The toxicology results come back negative. Dubos apparently did not overdose on the antidepressants. When Dr. Brown discusses the case and how to interpret the three notes with Dr. Cahill, the chief medical examiner, she moves the debate away from the intent behind the notes and instead focuses on whether the insulin pump malfunctioned. The relatives mail the glucose meter, and the lab downloads the glucose readings of Guy’s last days. The readings do not reveal or eliminate the possibility of an overdose.

In the case summary of the autopsy report, Dr. Brown simply states that they found “three pages of lyrics and poems of a depressive nature.” He notes that “the possibility of an insulin overdose either accidental or deliberate cannot be excluded. As insulin rapidly breaks down in the body, insulin levels could not be measured following death. Toxicology revealed a low level of ethanol and no toxic or lethal levels of medications or drugs. The possibility of hypoglycemia or a cardiac arrhythmia as a cause of death is most probable. However, neither can be proven or disproved. Cause of death: undetermined following complete autopsy and toxicologic evaluation. Manner of death: undetermined.” Over the next months, the relatives call several times asking for a more conclusive ending. They now believe that the deceased was a “brittle” diabetic and alcoholic who experienced a fatal alcohol relapse.

A year after the death, Dr. Brown has left the office, and two new young pathologists have been hired. When closing Dr. Brown’s cases, Dr. Cahill asks the new hires to review Guy Dubos’s case. These pathologists point out that in the scene pictures Guy lies dressed as if he was about to leave the house. If he had really wanted to commit suicide, they would have expected him to make himself comfortable and lie on a bed. They also note that the syringe and glucose bottle found next to Dubos’s body are used to fill the insulin pump and not to inject oneself with an extra dose. The final autopsy report dismisses the significance of the notes; “The decedent had been under financial distress and had filed for bankruptcy. In his home, they found three pages of lyrics and/or poems of a depressive nature. There were no straightforward sentences indicating that he was taking his own life, and his family indicates it was his custom to compose such lyrics.” Instead, the report centers on a biomedical cause of death. The cause of death has been changed to “cardiac arrhythmia associated with moderate atherosclerotic coronary artery disease and diabetes mellitus.” The manner of death is “natural.”

The case of Guy Dubos is relevant for two reasons: relatives’ ability to pressure medical examiners and the interpretation of evidence. I will address the issue of relatives’ involvement in the next section. The lengthy evaluation of evidence in Dubos’s investigation underscores the decision-making rule used by medical examiners to determine a suicide. The scene investigation of Dubos’s death produced some of the strongest indications of suicide: written notes. In addition, he had multiple life crises and an easy opportunity to kill himself—overdosing on insulin or antidepressants. Still, the death was classified as natural. How did the staff reach this conclusion?

When I reviewed Dubos’s death with Dr. Cahill, she laid out the professional interpretive frame that guided her decision-making. Referring to “the 51 percent rule of suicide,” she explained that when she looks over all the evidence that her office has gathered in a case, she imagines herself defending the manner of death to the deceased’s relatives. Her ultimate criterion is whether she can draw from the evidence with 51 percent certainty that this is indeed a suicide. If in her opinion the evidence provides a pattern that more likely than not points to suicidal intent, she will call it a suicide. A suicide classification is therefore neither a matter of elimination nor a default option.

Rather, it is a manner of death that must be positively demonstrated.

In the death of Dubos, the pathologists found the evidence lacking demonstration of suicidal intent. Suicide notes have been extensively examined as the next-best tool in suicide research, in the hope that their content or linguistic structures might reveal an underlying suicidal etiology (see, e.g., Gregory 1999; Leenaars 1988). Suicidologists have noticed the multiple references to concrete situations and people, the often-commanding instructions, and the recurrent themes of loss, abandonment, and rejection with regard to significant relationships. Although suicide notes might express feelings of hate, self-hatred, and revenge, studies suggest that they commonly indicate regret and love (Leenaars 1988:46–47). In this largely psychological research on suicide notes, the researchers seem to be confident that the notes that they analyze are “actual” suicide notes. Yet as Atkinson pointed out, the obviousness of suicide notes needs to be inferred because few notes are titled “suicide note” and few allude to the suicidal act or to death.

In Dubos’s case, we have several notes, but did they add up to a suicide note? The first page of notes consists of an initialed statement. The page starts with

I can’t find my way.  
I can’t find my way in those who surround me.  
I can’t find my way within my own self.  
The strength of friendship is stranger than that of love.  
No matter who that friend might be.

—GD

The second page seems a draft of the first. The third page starts with “I have a line drawn in the sand. (several lines unreadable) who is right, who is wrong, though we both know it” and then continues halfway down the page with “The reason why I die is <presumably male name> is greater than N + Y.” A little lower on the page, the note says, “It is <name current girlfriend> unto I curse, <other female name> PRAY FOR ME.” Under these lines is a time and day of the week. The time is half erased, but the day corresponds to the day that Guy quarreled with his girlfriend and was last seen alive.

Suicidologist Shneidman has argued that notes become meaningful within the context of the individual’s life story (Shneidman 1980). Putting the note in context of Guy Dubos’s cas-

cade of failing relationships and financial crises, his alcoholism and reported history of depression, the scene investigator felt that a preliminary suicide determination was appropriate. He saw a difference between the first and last note. The first notes were indeed lyrical but still expressed depression, loneliness, despair, and a longing to be with a significant other. The last note lacked the poetic element but was more direct in expressing suicidal intent. The CDC’s operational criteria for determining suicide consider an acknowledgment of impending death and expression of hopelessness as a sufficient indicator of intent to die. Researchers from the United States, Europe, and Asia have also shown that suicide is more common in highly creative or successful people: “eminent scientists, composers, and top businessmen were five times more likely to kill themselves than the general population; writers, especially poets, showed considerably higher rates” (Jamison 1999:181).

The notes and life crises, however, lost relevance in light of medical examiners’ orientation to pathological evidence. If the toxicology tests had shown an overdose of antidepressants or if lethal insulin levels could have been retrieved, Dubos’s notes could have become a suicide note of a man going through a life slump. A pathological finding counted as a positive demonstration. Because the pathologists explicitly looked for signs of an overdose but did not find any, suicide was not simply unsupported but was disproved. Although Dr. Brown stated that the coronary artery disease fell short of lethal levels, this finding gained prominence as the cause of death because it was the only pathological abnormality. Coronary artery disease is a sign of a natural death, not of suicide. Looking over the scene pictures, medical examiners detected additional circumstantial evidence that they interpreted as behavior inconsistent with suicidal intent. Thus, a death with many characteristics of suicide was determined to be natural.

The 51 percent rule of evidence reflects medical examiners’ professional position in the legal and medical world. The probabilistic decision-making rule retains a strong presumption against suicide that is refutable only by evidence. Following a process of differential diagnosis, clinicians usually treat the most



plausible cause of illness, even when clinical uncertainty prevails (Fox 2000). Pathologists are board-certified physicians, but they are required to follow a more stringent legal standard in death determinations than the guidelines orienting their clinical colleagues. Legally, suicide is considered an act against human nature, and any death is presumed to be natural unless demonstrated otherwise (Massello III 1985:1002–3). Suspicious deaths are thus suicides not because they resemble suicides but only because the accumulated evidence indicates a likely suicide. The legal standard is further confirmed by Dr. Cahill's imaging a defense of her conclusion to hostile relatives who were bound to disagree. Rather than an indication of the power of relatives, her imagined confrontation reflects the standard of certainty needed to defend one's opinion in an adversarial criminal cross-examination. Other pathologists similarly mentioned that they imagined being "assailed in court" when writing suicide as manner of death. Medical examiners testify regularly in criminal court, where their pathological descriptions and findings are crucial in prosecuting suspected perpetrators of violent deaths, and where their procedures and opinions are closely scrutinized by opposing counsel.

The death investigation of Guy Dubos showed that although Drs. Brown and Cahill relied on the same evidence and decision-making rule, they still disagreed about the classification of the death. When disagreements among pathologists occurred, Dr. Cahill's determination prevailed because she was the chief medical examiner and ultimately responsible for safeguarding the office's reputation. She decided when the evidence justified a specific classification. After conducting an autopsy or reviewing laboratory tests, the other pathologists had to defend their conclusions to her. In addition, she proofread every autopsy report and cosigned each death certificate. She was adamant that no information of an ongoing investigation was shared with the media or third parties. As in Anspach's study of decision-making in a neonatal intensive care unit (Anspach 1993), the staff presented a united front to the outside, smoothing out differences in opinion and making it difficult for relatives to contest a conclusion.

## PRESSURE FROM OUTSIDE PARTIES

### *MEDICAL EXAMINERS AND RELATIVES: THE STIGMA OF SUICIDE*

An alternative explanation for the medical examiner's decision to determine that Dubos's death was natural is that the staff caved in to the pressure of relatives. Motivated by a desire to avoid the stigma of suicide, bereaved family members acted as an external countervailing power. When dealing with relatives, medical examiners are faced with a recurring dilemma: they have to convince relatives that an invasive postmortem investigation, which might lead to a stigmatized manner of death, is in the general public's best interest. This dilemma is resolved by a strict interpretation of medical examiners' legal mandate: they have the legal right to take jurisdiction over suspicious deaths, even when relatives object, and to render a decision about the death independent of any involvement of relatives. Medical examiners hope, of course, that relatives agree that their investigation is valuable, that they realize it is beneficial to be cooperative, and that family members will accept their decision—but relatives' satisfaction is not a prerequisite to a successful death investigation. Instead, the legal mandate allows medical examiners to keep relatives out of the morgue and investigation. Their mandate is a sharp contrast to the coroner's court, where relatives' testimony carries much weight (Hallam et al. 1999).

The involvement of Guy Dubos's relatives in the death investigation was therefore exceptional. His brother had been tipped off by a police officer at the scene and, as a former defense attorney, he possessed occupationally cultured medicolegal knowledge. Ordinarily, the medical examiner's staff will not communicate preliminary findings with family members. Relatives often call the office, but the calls are screened by administrators who deliver scripted answers that the investigation is ongoing. Only if the pathologist has specific questions that remain unanswered in the reports of the scene investigator, police, or paramedics, will relatives be contacted. Here, however, relatives had an unusual opportunity to influence the death classification. Still, stating that they did not believe that Dubos took his own life was insufficient. They needed to work within the professional medicolegal frame, invalidating the most damning evidence, and so they offered



alternative medical reasons for Dubos's sudden demise and emphasized the uncertainty of the forensic evidence.

The relatives of another deceased man, Andy Williams, also contested a suicide determination, but they were unsuccessful, as relatives dissatisfied with a suicide determination more typically are. These relatives did not engage with the professional perspective of medical examiners but offered biographical reasons for eliminating suicide. They also were shut out of the decision-making process, and left to protest after the decision for suicide was already made.

The case of Andy Williams, a tall white man in his early thirties, was discussed during morning meeting along with a hanging, three victims of a small airplane crash, and two apparent natural deaths. Andy was a patient in a mental health facility who was on weekend release with relatives. He was found at the bottom of the parking garage of the city's new museum for rock and roll. During the autopsy the pathologist notices a broken femur. Most of the damage is internal. The spleen sticks through the diaphragm, the liver and left kidney are lacerated. The vena cava burst on impact and filled the chest cavity with blood. Surprisingly, Andy's skull is intact. The cause of death is crystal clear. The only question that remains is whether Andy fell or jumped off the garage.

A thick pile of psychiatric records arrives later that day. Andy Williams was diagnosed with bipolar disorder. In his manic phases he acted as the Antichrist, but his brooding, sad, and depressed moods most worried his therapists. Andy confided his anxiety about never getting well. He told his therapist that he liked to harm himself and often had suicidal thoughts, particularly a wish to jump off a tower. When his illness took its toll, Andy had to give up his job as plumber; his wife divorced him; and he became a resident in a state mental health facility. His family remained supportive and involved in his treatment. His parents and sister would take him out for a weekend whenever the staff decided that his suicidal ideation had sufficiently subsided. There had been a couple of near misses. Andy once climbed the water tower on the grounds of the mental health facility and threatened to jump but, ironically, was coaxed down with the promise of a McDonald's "happy meal." The lengthy mental health records repeated that Andy's long-term goal was the elimination of suicidal ideation, thoughts, and attempts.

According to the notes of a staff meeting, the week before Andy's death the therapists were unsure about letting him go on his next weekend release because he seemed depressed. They decided to hold a team meeting with his relatives on

Thursday and monitor Andy closely. Andy seemed to improve that week. During the team meeting with his parents, the staff supported the weekend release. Andy's mother casually mentioned that she planned to take him to the recently opened rock-and-roll museum. The staff's group leader tried to dissuade her. The notes of the meeting reported the exchange: "I explained that with son's attempts to jump off of the water tower, that taking him to that new museum, a five-story open area, might not be in son's best interest. She said that Andy would never jump when he was with her. I then explained that I would be remiss if I did not warn her." On Saturday morning, Andy left with a weekend supply of medication.

The police report detailed what happened at the museum. When Andy, his parents, sister, and brother-in-law went to retrieve the car from the fifth floor of the parking garage, Andy said that he wanted to smoke a cigarette next to a side wall. His sister and brother-in-law walked to the car, and when the sister looked back, she saw in a split second the last of his legs and shoes disappear over the wall. She screamed, "Andy jumped. Andy jumped." The family ran downstairs where Andy was spread out dead on the sidewalk.

When talking to the scene investigator, Andy's sister changed her story. She reported that she saw Andy "become dizzy and roll off the edge." The investigator went to the parking garage and took pictures and measurements of the wall and noted the garage's safety measures. According to the police and scene investigation, someone standing on the floor of the garage would likely be unable to fall off. The relatives called the office at weekly intervals and frustrated by the lack of information and the slow pace of the investigation, requested a formal hearing. Without revealing preliminary findings, Dr. Cahill explained her office's procedures.

The final autopsy report put most weight on the parking garage's safety measures, "The decedent was 75 inches in height, and the safety bar at the top of the wall was 3 feet 11 inches above the floor. According to the police investigation, there is also a safety wire, which is 2 feet 2 inches above the floor and 1 foot 1 inch inside the wall. If a person were standing on the floor of the garage adjacent to the lower safety wire, if he were to fall forward, his center of gravity would be well below the top of the safety bar and he would not fall out of the garage."

The final manner of death was suicide. The relatives requested another meeting with the medical examiner's staff. They dismissed the information presented by the pathologists. They repeated, "You didn't know Andy. He would never jump if we were around. It was unlike him to jump." Where the medical examiner's staff validated suicide in the

mental health records, Andy's father and sister detected instead the signs promising a recovery. They asserted that Andy was getting much better. The father pleaded that he simply could not live with a suicide determination. The relatives offered to sign a form that they would refrain from a lawsuit if the pathologist changed the classification to undetermined. The medical examiner's staff expressed sympathy but did not change the suicide determination.

Andy Williams's death investigation confirms medical examiners' medicolegal interpretive frame. In light of Andy Williams's history of threatening to jump off buildings, his repeated suicide threats and fantasies, and the way he was found, a suicide classification seemed inevitable. To the medical examiner's staff, however, the case was not that straightforward: a medicolegal standard requires them to locate positive proof in the death itself. Even people with death wishes might accidentally fall off buildings. The evidence that clinched the case was the information about safety in the garage. The wall and safety wire were interpreted as a demonstration that this death was not an accident. Andy needed to make a deliberate effort to get over the wall and so established an intent to die. All the other mental health and biographical information pushed a suicide determination over the 51 percent probability that Dr. Cahill set for her office.

According to the suicide literature, relatives are presumed to steer the verdict away from the stigma of suicide, whereas medical examiners are expected to rely on objective criteria. Yet the relationship between medical examiners and the stigma of suicide is more complicated. Forensic pathologists are well aware of the stigma of a suicide classification and consider it when they weigh the possibility of suicide. They may occasionally argue against a suicide determination because of the stigma, but they nevertheless apply the category and even reinforce the stigmatizing connotations of suicide to convince dissenters. Thus, the stigma of suicide motivates not only relatives but also professionals; the distinction is a difference in the power to act on a concern about stigma.

First, medical examiners are well aware of the stigma of suicide and their moral entrepreneurial role as "labelers" of suicide (Becker 1963). Because their patients cannot be injured or harmed, they are rarely sued, but the most likely lawsuit involves a suicide (Hanzlick 1997).

Because relatives had mentioned their willingness to sign a waiver if the pathologist changed the death certificate, the staff anticipated that Williams's relatives might file a lawsuit. The pathologists in my study were also confronted with the ongoing saga of a father distraught by the suicide classification of his son's death. The father had contacted state and federal officials in a fruitless attempt to change his son's death certificate. Pathologists expressed some sympathy for relatives unhappy with suicide classifications and even showed understanding toward relatives who angrily argued with them or hid suicide notes. One pathologist acknowledged the gravity of a suicide classification when he noted that it would "ostracize" a family, creating a "heavy burden" and a more difficult grieving process. Suicide becomes a marker of deep, possibly hereditary mental health issues, an "immoral act," or even a crime (MacDonald 1989). The pathologists also pointed out that suicide classifications might void double-indemnity insurance payments and influence civil litigation.

Second, as members of our society, pathologists share notions about stigmatized suicide and consider them central to suicide deliberations. Yet not only do they have a better opportunity than relatives to act upon those notions, but they also need to apply those norms about suicide to assess suicidal intent. When evaluating evidence, medical examiners ponder whether the deceased could have intended to commit suicide *in spite of* the stigma. The desperation quota thus needs to be greater than the presumed stigma. Medical examiners consider the stigma a demotivating factor. In a society where suicide constitutes an honorable death (e.g., kamikaze pilots during the Second World War, or suicide bombers in the Middle East) or is apparently routinized (as in traditional Inuit and Samoan culture; Bromberg and Cassel 1983; Leighton and Hughes 1955), officials might be more likely to classify suspicious deaths as suicides. At this particular historical moment, however, the stigma of suicide necessarily affects every aspect of suicide determination.

Medical examiners' active evaluation of stigma to establish intent was, in my study most apparent in the deaths of teens. In two cases, teenage boys died apparently self-inflicted deaths, but the medical examiner did not deem

them suicides. In the first case, a boy was found partially suspended with a dog leash in a bathroom, and in the second an older teen jumped off a bridge. In both cases much evidence pointed to suicide: the boy found hanging had a classmate who had killed himself the previous year in a similar manner, and the teen who jumped from the bridge had repeatedly engaged in risk-taking behavior that skirted the edge of suicide. The discussions in the medical examiner's office, however, turned on whether these teens fully grasped the lethal consequences of their actions and whether the stigma of suicide would have deterred them. The staff concluded that the young men recognized neither the stigma of suicide nor the consequences of their acts. In the case of the young man who jumped from the bridge, the medical examiners agreed that the death was self-inflicted and reckless but not intentional; it was classified as accidental. In the other case, the staff could not discern a reason for the hanging, and they left the death undetermined.

Third, medical examiners invoke stigma both to confirm and to negate suicide. Depending on the strength of the evidence, similar family involvement in possible suicide cases is evaluated differently. In Guy Dubos's case, the evidence was considered weak, and the pathologists acknowledged the negative moral implications of labeling deaths suicide and the heavy load the label might add to a grieving family. Medical examiners instead emphasized the heart disease complicated by diabetes and remaining ambiguity. A death investigator explained, "When in doubt, don't use [suicide]. This is the consensus of medical and forensic examiners" (Fisher 2000:26). Dingwall, Eekelaar, and Murray (1983:ch. 4) referred to such reasoning as the "rule of optimism": when confronted with ambiguity, the deceased was given the benefit of the doubt. In Andy Williams's case, however, the medical examiners regarded suicide not as a moral term but as a medicolegal description grounded in an inductive examination of the evidence. Suicide was not a mere stigmatizing label but a substantiated entity, a legally defensible professional accomplishment. To convince Andy's relatives the medical examiner fell back on forensic evidence, but acknowledged that Andy's family would be dissatisfied with the information.

Fourth, medical examiners rely on the stigmatizing connotations of suicide to justify their classification: the stigma of the manner of death becomes a self-fulfilling prophecy. For Andy's relatives, suicide would never become a scientific or legal descriptor but would always indicate a moral stigma that could not apply to their son or brother. Andy's parents and sister seemed to see suicide classification as a personal affront: how could Andy have killed himself, they argued, when the people who loved him most and knew him best were around? They countered every past indication of suicide with a story of small victories attempting to sweep away medicolegal evidence with biographical information. In light of the identity pollution implied in suicide, they pleaded that no public health benefit could justify their immense suffering. Ironically, their objections further confirmed the stigma of suicide and turned them into *deniers* who *refuse* to accept suicide. The mental health terms that surrounded Andy's life (such as "compulsive" and "obsessive") thus slipped into the medical examiners' references to his relatives.

Relatives and death investigators present two different standards grounded in a common cultural notion of suicide as a stigmatized category. Here, incommensurability does not lead to a paradigm shift, a new way of thinking about suicide. Nor does the voice of medicine overwhelm the voice of the life world (Mishler 1984). When ambiguity prevails, medical examiners apply arguments against suicide similar to those of relatives. The difference in implementation stems from the institutionalization of professional power. As Link and Phelan (2001:375), following Goffman (1963), point out, "[I]t takes power to stigmatize," and medical examiners' power resides in their legal mandate as professionals to classify suspicious deaths. As the course of Andy Williams's death investigation clearly shows, relatives have little or no recourse against medical examiners' determinations. Once a death is officially validated, dissatisfied relatives run into the exclusive and protected nature of professional work.

**MEDICAL EXAMINERS AND PUBLIC HEALTH:  
THE ORGANIZATIONAL ECOLOGY OF DEATH  
INVESTIGATION**

If relatives have few opportunities to influence death investigation, how do other stakeholders fare? Social epidemiologists and sociologists have long suspected that death investigators underreport suicide. Have their critiques directly or indirectly changed forensic practice?

On a frosty October afternoon, Dahlia Schweingruber, a 58-year-old retired woman was extracted from her car. She apparently drove her new Ford Explorer over two concrete medians and hit a telephone pole. The collision occurred at about 2:00 pm while the weather and road conditions were clear. The event was unwitnessed. The first people driving past the site mentioned a cloud of dust and smoke. Dahlia had eaten lunch and was on her way to a hairdresser's appointment. Right before an intersection, her car veered off the road and hit a wooden pole. She was not wearing a seatbelt, but both front airbags deployed. She was transferred to the state hospital and was declared dead on arrival. The medical examiner's office picked up the body, and during morning meeting, the investigator notes that there was not much medical history because she had not seen a physician in years. Dr. Cahill wonders whether the woman experienced a cardiac event.

She does the autopsy with a state police official present. On the X-rays she notes that all ribs on the right side are broken. She wonders whether the bones might be osteoporotic. The arms are full of bruises. Dr. Cahill explains the bruises as airbag injuries. The deceased also has a broken neck and a ruptured vena cava. Her lungs are collapsed, and the heart is bruised.

The autopsy provides enough elements to explain the woman's death, but the pathologist looks for a medical indication for driving off the road. Dr. Cahill expects a bad heart, but the coronaries are fine. This finding poses a problem, and the pathologist does not know what she will do with it. In the end, with the precipitating event unresolved, Dr. Cahill writes "massive internal bleeding due to vena cava and heart injuries" for cause of death and "accident" for manner of death. Before sending the body back to the storage refrigerator, she informs the attending police officer of her main findings.

What is remarkable about this case is that the suspicion of suicide was never raised, although it would have explained a seemingly preventable accident. I observed six single-vehicle acci-

dents where people went off the road, hit a stationary object, and died. In four cases the driver's blood alcohol level exceeded legal limits. In all these accidents, determining the cause of death was straightforward: lacerated organs, torn blood vessels, or cerebral injuries. From the onset, these cases fit accidental death as a manner of death, and the determination went unchallenged. Car crashes are examples of accidents and, by implication, routine non-suicides.

Public health officials and social epidemiologists have long suspected that single-vehicle accidents are a major source of suicide underreporting (Peck and Warner 1995; Pescosolido and Mendelsohn 1986; Schmidt et al. 1977). According to pathologists, however, the lack of motor vehicle suicides indicates not oversight but the strength of their scientific investigative process. Looking for evidence confirming suicide, a forensic textbook defines the difference between accident and suicide as use of the vehicle's brakes before impact. If witnesses did not observe braking, if the tire tracks do not indicate any swerving to avoid the obstacle, or if the sole of the driver's shoe transferred a pattern of the gas pedal instead of the brake pedal, then the deceased was accelerating at the time of the impact. Yet the brakes provide only "confirmatory evidence of a suicide" (DiMaio and DiMaio 1989:272). The more important evidence indicating suicide is a history of previous suicide attempts and psychiatric treatment. Because scene investigators do not check the deceased's home for a suicide note, this kind of evidence is not considered unless relatives voluntarily turn the note over. Relatives will be only cursorily interviewed by scene investigators, and they will not be contacted by police officers or a forensic psychologist. Few people will come forward with the suspicion of suicide. Because major evidence that could suggest suicide is thus routinely unavailable (Jonasson et al. 1999), a suicide determination in a single-vehicle accident or in a pedestrian death is unlikely.

Why have decades-long suspicions by epidemiologists that single-car accidents harbor undetected suicides been unable to alter medical examiners' investigative procedures? Epidemiologists' limited success in changing forensic practice resides in their peripheral role in death investigation. If the organizational ecology of the medical examiner's office compris-



es the institutional arrangements necessary to fulfill its professional tasks (Anspach 1993:ch. 5), the office is most vulnerable in the information it requires to classify suspicious deaths. Forensic pathologists receive information from different agencies and process this information into data useful for state bureaucracies. Medical examiners gather information from health care providers and law enforcement and occasionally funeral directors. The parallel law enforcement investigation in suspicious death intensifies the relationship with police officers. Law enforcement officials not only bring additional evidence to the autopsy—and are the only outsiders permitted to attend autopsies—but also have an opportunity to confirm or dispute preliminary interpretations. In complicated, equivocal cases involving the possibility of foul play, the medical examiner often called a meeting with district attorneys and law enforcement officials to review the evidence and consulted with these parties before the cause and manner of death were determined. The organizational ecology further includes the parties to whom the medical examiner communicates the results of its investigation.

Death investigators help provide the raw material for mortality statistics, but epidemiologists rarely interact directly during the post-mortem investigation. In most death investigations, medical examiners filed the death certificate via the funeral director and the city hall with the office of vital statistics and records. Only if unusual deaths merit public health attention does the medical examiner's office take the initiative to inform public health officials directly. During my research, the pathologists mentioned only one letter from the CDC, alerting them to be aware of heat-related deaths during the summer months, but they interacted with law enforcement on a daily basis. The CDC has spearheaded the standardized operational criteria to determine suicide (Rosenberg et al. 1988), but has had little success in obtaining uniformity (Hanzlick and Goodin 1997). Indeed, standardized protocols have had a marginal track record in changing professional behavior in medicine, as has become apparent in the current evidence-based movement (Timmermans and Berg 2003). Medical examiners do not receive funding or resources for additional suicide detection. Medical examiners are less con-

cerned with identifying every possible suicide than they are with proving that every suicidal death meets the evidentiary standard. A false negative, a suicidal death classified as natural or accident, does not tarnish their credibility. A false positive, classifying a non-suicidal death as a suicide, however, might challenge the profession's authority.

The lack of external pressure to define suicides accurately carries one important exception, but it is the proverbial exception that confirms the rule. The forensic pathology literature is attuned to resolving ambiguity in violent deaths with characteristics of either suicide or homicide. In either situation, the medicolegal stakes are very high: a false suicide certification might provide the perfect cover for a homicide, and a false homicide might implicate innocent suspects in a criminal investigation. In potential suicide-homicides, the closest allies in the organizational ecology, law enforcement officials, directly and closely interact with the medical examiner from the time the body is discovered to the moment the death certificate is signed. While death investigators contribute to the public good, therefore, the work practices of forensic pathologists reflect a ranking of suspicious deaths: the highest priority is to detect homicides. If suicide detection were the top priority, professionals specializing in evaluating intent—such as forensic psychologists—would play a greater role in death investigation.

## CONCLUSION: THE PROFESSIONAL CONSTITUTION OF A SUICIDE DETERMINATION

Public health officials and epidemiologists using statistical tools discover hidden suicides where medical examiners working with physical and documentary evidence see accidents or undetermined deaths. Relatives situating death in the life course of their loved one see even less suicide than the medical examiner. Thus, three stakeholders using their own criteria develop different notions of suicide: a biographical suicide that rarely acknowledges self-inflicted death, a medicolegal suicide, and an epidemiological suicide rate with suspected under-reporting. The rule of proximity may explain suicide determination: the closer one is to the deceased, the less likely one is to consider the



death a suicide. MacKenzie (2001:333–34) similarly observed that those at an intermediate social distance from the production of scientific knowledge appear to evince greater certainty than those who take part directly in its production.

A medicolegal suicide is a professional classification according to forensic investigative criteria. Medical examiners' legal mandate guarantees access to bodies. With death investigative jurisdiction beyond dispute, the classification is inductively constructed from pieces of evidence under the aura of biomedical sciences and legal prerogatives. The medical aspects of the medicolegal suicide refer to the pathologists' inductive approach when evaluating evidence similar to patient assessment procedures and the privileging of pathological information. The legal aspects of medicolegal suicide involve the evidentiary standard needed for a suicide determination and the judicial status of the final classification. A suspicious death needs to be positively demonstrated to be self-inflicted and intentional; it is not a default or residual option. In addition, the accumulated evidence must more likely indicate suicide than some other cause. In routine suicides, the suicide threshold is quickly reached because of the match between professional prerogatives and evidence, and in routine non-suicides the possibility of suicide is not raised. To minimize dissent in equivocal deaths and define what qualifies as 51 percent of suicide evidence, medical examiners exchange information within the organizational ecology of the investigative system and work closely with key allies. Medical examiners contribute most to the public good by conducting legally valid investigations. The interests of relatives and public health are secondary. Pathologists necessarily take the stigma of suicide into consideration when they certify a death as a suicide and when they determine that a death was due to other causes. The immediate purpose of the determination on the death certificate is legal: to permit disposal of the body and exclude foul play (Carter 1985). The resulting professional authority is thus organizationally, scientifically, medically, and legally anchored.

When either relatives or epidemiologists disagree with the official medicolegal classification, both parties are at a disadvantage to

influence the outcome of the death investigation. Relatives are usually unprepared for a forensic inquiry and have little knowledge of the medicolegal details that matter. While they might remove suicide evidence from the scene, they have few opportunities to offer their interpretation directly, and whatever they say is presumed to be self-serving and will be screened by police officers, psychiatrists, or scene investigators. If relatives disagree after the death certificate has been filed, they have little chance to prevail in a lawsuit if the medical examiner has followed standard procedures (Hanzlick 1997).

Public health officials have even less opportunity to influence suicide determinations. They hardly feature in the organizational ecology except at the end, when the death certificate is mailed to the office of vital statistics. Consequently, even if suicides are statistically "hidden" in aggregate categories such as single-car accidents, this information is useless for medical examiners satisfying medicolegal criteria in individual cases. "Hidden suicides," "systemic reporting bias," and "underreporting" presume that with better standards of evidence other observers would be able to find the "true" suicides and transcend the "biases" of the medical examiners. Such a suggestion ignores the local medicolegal character of a professional death investigation. In addition, because of the insoluble problems of premortem intent and self-infliction, no alternative method can establish the validity of suicide statistics; making it impossible to determine conclusively the size of a possible statistical correction. Sociologists and epidemiologists therefore continue to rely on the classifications of death investigators (Sirken et al. 1987).

Lacking an external standard, the question of suicide accuracy is unlikely to be conclusively settled. An interprofessional comparison between coroners and medical examiners, however, can determine who will misclassify suicide. Both coroners and medical examiners are most likely to miss self-inflicted deaths in elderly or chronically ill people without external signs of trauma. Because of the medical division of labor, both groups of death investigators rely on clinicians to certify those deaths and will forgo a postmortem investigation. Compared to coroners, medical examiners are less likely to certify suicides for four reasons. First, when

conducting postmortem investigations, medical examiners are inclined to discover chronic disease that offers a credible, alternative explanation for circumstantial evidence suggesting suicide. Because of their orientation to pathology, medical examiners also rarely wonder about suicide in deaths that are apparent accidents or natural deaths. The growing scientific basis of medicine has thus raised the bar for suicide detection (Dingwall et al. 1983:52; Pescosolido and Mendelsohn 1986). Second, medical examiners also tend to underreport suicide because they require a preponderance of evidence, an evidentiary standard created for legal purposes. A suicide cannot be presumed but needs to be positively demonstrated. Third, false positives carry greater risks to professional authority than false negatives. Medical examiners have little incentive to detect more suicides, but they might lose credibility if they mistake non-suicides for suicides. False positives might not only lead to persistent criticism from relatives but also endanger the exchange relationship with key allies in the organizational ecology of death investigation who might be unwilling to share sensitive information. Fourth, pressure of relatives is less likely to influence medical examiners than coroners because relatives are kept out of the medical examiner's investigation. Contrary to common wisdom, relatives' limited opportunity to participate in the death investigation might actually stifle suicide detection because relatives are often the only source for crucial evidence of suicide in apparent accidents and natural deaths (Jonasson et al. 1999). The deaths that medical examiners might more likely classify as suicides are traumatic deaths with characteristics of suicide and homicide, but those deaths are rare. Consequently, three populations have a greater likelihood for suicide undercounting: women because they are more likely to overdose than men, elderly and chronically ill people because their deaths are less likely to be forensically investigated, and teens because they are not presumed to express suicidal intent. Lower or higher suicide figures, however, do not necessarily imply less accuracy but reflect a shift in the criteria for evidence with the medical professionalization of death investigations.

Differences in reporting between coroners and medical examiners are not necessarily prob-

lematic for epidemiological research if suicide determination remains systematic. Geographical variation in suicide determination, however, suggests otherwise. Medical examiners readily admit that suicide determinations differ from jurisdiction to jurisdiction (Hanzlick and Goodin 1997). My research suggests two reasons for geographical variation. First, medical examiners employ internal oversight procedures to make sure that determinations meet the evidentiary standard of the chief medical examiner. Second, the chief medical examiner consults with law enforcement and district attorneys to ascertain the legal validity of the determinations. The medicolegal standard is thus locally based, dependent on shifts in jurisprudence and personnel. These geographic variations are likely exacerbated by the copresence of elected and appointed coroners, different kinds of organizational oversight, legal statutes, and resources.

These findings suggest that the surgeon general's proposed standardization of suicide terminology will have limited effectiveness if it is not accompanied with a deeper involvement of public health concerns in death investigation. Death investigators have also been criticized for underreporting child homicide (Lundstrom and Sharpe 1991), and in that case, child advocates supported by federal and state laws and professional organizations (American Academy of Pediatrics 1999) have set up interdisciplinary child-death review teams in some states to collaborate with medical examiners and coroners (Durfee, Durfee, and West 2002). Most observers are satisfied that, after interdisciplinary review, few child abuse deaths remain misclassified (Durfee et al. 2002). Suicide fails to mobilize the same resources. Instead, forensic professional organizations have attempted to standardize suicide determinations more completely with operational criteria (Hanzlick 2003), even though these tools constitute some of the weakest means to change professional behavior (Timmermans and Berg 2003). Psychological autopsies might also provide more accurate suicide determinations (Schmidt et al. 1977), but only two jurisdictions use them routinely (Shneidman 1980). In addition, public health researchers contemplate instituting a standard suicide reporting system similar to the Fatality Analysis Reporting System to track the incidence of motor vehicle-related deaths. The

National Violent Death Reporting System attempts to overcome geographical variation with data collection about homicide and suicide from different sources (Goldsmith et al. 2002:383–84).

Does the resilience of medical examiners' authority in light of sustained criticism mean that Freidson's theory of professional dominance was correct while Light's theory of countervailing powers is falsified? In the current medicolegal climate, medical examiners are not thwarted by countervailing powers. The caveat is in "the current medicolegal climate." In spite of questions to their authority, medical examiners still offer the most objective death investigation, and their interpretations gain credibility from their scientific handling of evidence according to legally acceptable procedures and exchange relationships with allies. As many observers have noted (e.g., Saks 2000), it is virtually impossible to imagine a criminal justice system without forensic pathology. Medical examiners offer a specific additional value, captured by Freidson in his focus on the actual work performed by professionals. Light's theory of countervailing powers tends to privilege macro relationships between stakeholders while ignoring the content of their work. A theory of professional power needs to combine the ability of Light's theory to account for shifts in power with Freidson's focus on the content of professional work. Thus, while medical examiners have been able to maintain authority in spite of variation in suicide rates, the situation might change with the formation of a consensus among the public and government or legal officials that the content does not warrant the professional authority of pathologists, or if relationships among allies and critics were to shift. An example of exactly such a loss of authority is the profound questioning of the scientific value of forensic fingerprinting due to changes in admittance criteria of scientific evidence in court (Cole 2001).

Considering suicide determinations from the perspective of the sociology of professions helps explain why, after more than a century of criticism, suicide statistics will likely remain variable. "Around every core of 'expert' knowledge is a penumbra, a domain in which core competence is helpful but not definitive, in which competent experts may disagree, and disagree

because the questions in this domain cannot be decided in terms of the core issues that define competence" (Turner 2001:133). Suicide belongs to the penumbra of death investigation. Medical examiners have the official mandate to detect, document, and classify suicides, but suicides are not easily determined by pathologists. The professional characteristics that safeguard medical examiners' authority also form a buffer against uniform determinations. What counts officially as a suicide thus depends on the professional strengths and weaknesses of death investigators.

*Stefan Timmermans is Associate Professor of Sociology at Brandeis University and a Robert Wood Johnson Fellow in the Health and Society program at Harvard School of Public Health. His research focuses primarily on medical technologies, death and dying, ethnography, sociology of health and illness, and science studies. His publications include Sudden Death and the Myth of CPR (Temple University Press, 1999), The Gold Standard: The Challenge of Evidence-Based Medicine and Standardization in Health Care (with Marc Berg, Temple University Press, 2003). His book Suspicious Death is forthcoming from the University of Chicago Press.*

## REFERENCES

- Abbott, Andrew. 1988. *The System of Professions*. Chicago, IL: University of Chicago Press.
- American Academy of Pediatrics. 1999. "Investigation and Review of Unexpected Infant and Child Deaths." *Pediatrics* 104:1158–60.
- Anderson, Olive. 1987. *Suicide in Victorian and Edwardian England*. Oxford, England: Clarendon.
- Anspach, Renee. 1993. *Deciding Who Lives: Fateful Choices in the Intensive Care Nursery*. Berkeley, CA: University of California Press.
- Atkinson, Maxwell J. 1971. "Societal Reactions to Suicide: The Role of Coroners' Definitions." Pp. 165–91 in *Images of Deviance*, edited by S. Cohen. New York: Penguin.
- . 1978. *Discovering Suicide: Studies in the Social Organization of Sudden Death*. London and Basingstoke, England: Macmillan.
- Becker, Howard S. 1963. *Outsiders: Studies in the Sociology of Deviance*. New York: Free Press.
- Bloor, Michael. 1991. "A Minor Office: The Variable and Socially Constructed Character of Death Certification in a Scottish City." *Journal of Health and Social Behavior* 32:273–287.
- Bonnie, Richard. 2003. "Closing Remarks." Pp. 61–64 in *Medicolegal Death Investigation System*:

- Workshop Summary*, edited by American Institute of Medicine. Washington, DC: National Academies Press.
- Bromberg, S. and C. K. Cassel. 1983. "Suicide in the Elderly: The Limits of Paternalism." *Journal of the American Geriatrics Society* 31:698–703.
- Burney, Ian. 2000. *Bodies of Evidence*. Baltimore, MD: Johns Hopkins University Press.
- Cantor, Christopher Henry, Antoon A. Leenaars, and David Lester. 1997. "Under-Reporting of Suicide in Ireland 1960–1989." *Archives of Suicide Research* 3:5–12.
- Carter, John M. 1985. "The Problematic Death Certificate." *New England Journal of Medicine* 313:1285–86.
- Cole, Simon A. 2001. *Suspect Identities: A History of Fingerprinting and Criminal Identification*. Cambridge, MA: Harvard University Press.
- deJong, John L. and Randy Hanzlick. 2000. "Level of Agreement between Opinions of Medical Examiner Investigators and Forensic Pathologist Medical Examiners Regarding the Manner of Death." *American Journal of Forensic Medicine and Pathology* 21:11–20.
- DiMaio, Dominick J. and Vincent J. M. DiMaio. 1989. *Forensic Pathology*. New York: Elsevier.
- Dingwall, Robert, John Eekelaar, and Topsy Murray. 1983. *The Protection of Children*. Oxford, England: Basil Blackwell.
- Douglas, Jack. 1967. *The Social Meanings of Suicide*. Princeton, NJ: Princeton University Press.
- Doyle, Arthur Conan. [1927] 1993. *The Case-Book of Sherlock Holmes*. Oxford, England: Oxford University Press.
- Durfee, M., D. T. Durfee, and M. P. West. 2002. "Child Fatality Review: An International Movement." *Child Abuse and Neglect* 26:619–36.
- Durkheim, Emile. [1897] 1979. *Suicide: A Study in Sociology*. Translated by John A. Spaulding and George Simpson. New York: Free Press.
- Fisher, Daniel J. 2000. "Equivocal Cases of Teenage Suicide." *The Forensic Examiner* 9:24–27.
- Fox, Renee C. 2000. "Medical Uncertainty Revisited." Pp. 409–25 in *The Handbook of Social Studies in Health and Medicine*, edited by G. L. Albrecht, R. Fitzpatrick, and S. C. Scrimshaw. London, England: Sage.
- Freidson, Eliot. 1970. *Professional Dominance*. New York: Atherton.
- . 1994. *Professionalism Reborn: Theory, Prophecy, and Policy*. Chicago, IL: University of Chicago Press.
- Garfinkel, Harold. 1967. "Practical Sociological Reasoning: Some Features in the Work of the Los Angeles Suicide Prevention Center." Pp. 171–87 in *Essays in Self-Destruction*, edited by E. S. Shneidman. New York: Science House.
- Goffman, Erving. 1963. *Stigma: Notes on the Management of Spoiled Identity*. New York: Touchstone.
- Goldsmith, S. K., T. C. Pellmar, A. M. Kleinman, and W. E. Bunney. 2002. *Reducing Suicide: A National Imperative*. Washington, DC: National Academies Press.
- Goodin, Julia and Randy Hanzlick. 1997. "Mind Your Manners Part II: General Results from the National Association of Medical Examiners Manner of Death Questionnaire, 1995." *The American Journal of Forensic Medicine and Pathology* 18:224–27.
- Gregory, Adam. 1999. "The Decision to Die: The Psychology of the Suicide Note." Pp. 127–57 in *Interviewing and Deception*, edited by D. Canter and J. A. Laurence. Dartmouth, England: Ashgate.
- Hallam, Elizabeth, Jenny Hockey, and Glennys Howarth. 1999. *Beyond the Body: Death and Social Identity*. London, England, and New York: Routledge.
- Halpern, Sydney. 1992. "Dynamics of Professional Control: Internal Coalitions and Crossprofessional Boundaries." *American Journal of Sociology* 97:994–1021.
- Hanzlick, Randy. 1997. "Lawsuits against Medical Examiners or Coroners Arising from Death Certificates." *American Journal of Forensic and Medical Pathology* 18:119–23.
- . 2003. "Overview of the Medicolegal Death Investigation System in the United States." Pp. 7–11 in *Medicolegal Death Investigation System: Workshop Summary*, edited by American Institute of Medicine Washington, DC: National Academies Press.
- Hanzlick, Randy and Julia Goodin. 1997. "Mind Your Manners Part III: Individual Scenario Results and Discussion of the National Association of Medical Examiners Manner of Death Questionnaire." *The American Journal of Forensic Medicine and Pathology* 18:228–45.
- Hanzlick, Randy, John C. Hunsaker III, and Gregory J. Davis. 2002. "A Guide for Manner of Death Classification." Atlanta, GA, National Association of Medical Examiners.
- Hendin, H. 1964. *Suicide in Scandinavia*. New York: Grune and Stratton.
- Humphry, Derek. 2003. *Final Exit: The Practicalities of Self-Deliverance and Assisted Suicide for the Dying*. New York: Dell.
- Jamison, Kay Redfield. 1999. *Night Falls Fast: Understanding Suicide*. New York: Vintage.
- Jobs, D. A., A. L. Berman, and A. R. Josselson. 1987. "Improving the Validity and Reliability of Medical-Legal Certifications of Suicide." *Suicide and Life-Threatening Behavior* 17:310–25.
- Johnson, H. R. M. 1969. "The Incidence of Unnatural Deaths Which Have Been Presumed to be Natural



- in Coroners' Autopsies." *Medicine, Science, and the Law* 9: 102–106.
- Johnson-McGrath, Julie. 1995. "Speaking for the Dead: Forensic Pathologists and Criminal Justice in the United States." *Science, Technology, and Human Values* 20:438–459.
- Jonasson, B., U. Jonasson, and T. Saldeen. 1999. "Suicides May Be Overreported and Accidents Underreported among Facilities Due to Dextropropoxyphene." *Journal of Forensic Sciences* 44:334–38.
- Kelleher, Michael J., Paul Corcoran, and Helen S. Keeley. 1997. "Suicide in Ireland: Statistical, Social and Clinical Considerations." *Archives of Suicide Research* 3:13–24.
- Kitsuse, John I. and Aaron V. Cicourel. 1963. "A Note on the Uses of Official Statistics." *Social Problems* 11:131–39.
- Lebrun, George P. (as told to Edward D. Radin). 1962. *It's Time to Tell*. New York: William Morrow.
- Leenaars, Antoon A. 1988. *Suicide Notes: Predictive Clues and Patterns*. New York: Human Sciences.
- Leicht, Kevin T. and Mary L. Fennell. 1997. "The Changing Organizational Context of Professional Work." *Annual Review of Sociology* 23:215–31.
- Leighton, A. C. and C. C. Hughes. 1955. "Notes on Eskimo Patterns of Suicide." *Southwestern Journal of Anthropology* 11:327–38.
- Light, Donald W. 1995. "Countervailing Powers: A Framework for Professions in Transition." Pp. 25–41 in *Health Professions and the State in Europe*, edited by T. Johnson, G. Larkin, and M. Saks. London, England, and New York: Routledge.
- . 2000. "The Medical Profession and Organizational Change: From Professional Dominance to Countervailing Power." Pp. 201–17 in *Handbook of Medical Sociology*, edited by C. E. Bird, P. Conrad, and A. M. Fremont. Upper Saddle River, NJ: Prentice Hall.
- Link, Bruce and Jo C. Phelan. 2001. "Conceptualizing Stigma." *Annual Review of Sociology* 27:63–85.
- Lundstrom, Marie and Rochelle Sharpe. 1991. "Getting Away with Murder." *Public Welfare* 49:18–29.
- MacDonald, Michael. 1989. "The Medicalization of Suicide in England: Laymen, Physicians, and Cultural Change, 1500–1870." *The Milbank Quarterly* 67:69–91.
- MacKenzie, Donald. 2001. *Mechanizing Proof: Computing, Risk, and Trust*. Cambridge, MA: MIT Press.
- Massello III, William. 1985. "The Proof in Law of Suicide." *Journal of Forensic Sciences* 31:1000–8.
- Mishler, Elliot G. 1984. *Discourse of Medicine*. Norwood, NJ: Albx.
- Neeleman, J. and S. Wessely. 1997. "Changes in Classification of Suicide in England and Wales: Time Trends and Associations with Coroners' Professional Backgrounds." *Psychology and Medicine* 27:467–72.
- O'Carroll, P. W. 1989. "A Consideration of the Validity and Reliability of Suicide Mortality Data." *Suicide and Life Threatening Behavior* 19:1–16.
- Peck, D. L. and K. Warner. 1995. "Accident of Suicide? Single-Vehicle Car Accidents and the Intent Hypothesis." *Adolescence* 30:463–72.
- Pescosolido, Bernice A. and Robert Mendelsohn. 1986. "Social Causation or Social Construction of Suicide? An Investigation into the Social Organization of Official Rates." *American Sociological Review* 51:80–101.
- Phillips, David P. and Todd E. Ruth. 1993. "Adequacy of Official Suicide Statistics for Scientific Research and Public Policy." *Suicide and Life-Threatening Behavior* 23:307–19.
- Prahlow, Joseph A., Scarlett Long, and Jeffrey J. Barnard. 1998. "A Suicide Disguised as a Homicide: Return to Thor Bridge." *The American Journal of Forensic Medicine and Pathology* 19:186–89.
- Rosenberg, M. L., L. E. Davidson, J. C. Smith, A. L. Berman, H. Buzbee, G. Ganter, G. A. Gay, B. Moore-Lewis, D. H. Mills, D. Murray, P. W. O'Carroll, and B. Jobes. 1988. "Operational Criteria for the Determination of Suicide." *Journal of Forensic Sciences* 32:1445–55.
- Saks, Michael. 2000. "Banishing Ipse Dixit: The Impact of Kumho Tire on Forensic Identification Sciences." *Washington and Lee University Law Review* 57:879–900.
- Sahyoun, Nadine R., Harold Lentzner, Donna Hoyert, and Kristen N. Robinson. 2001. *Trends in Causes of Death Among the Elderly*. Aging Trends 1. Hyattsville, MD: National Center for Health Statistics, Hyattsville, Maryland.
- Schlesinger, Mark. 2002. "A Loss of Faith: The Sources of Reduced Political Legitimacy for the American Medical Profession." *The Milbank Quarterly* 80:185–235.
- Schmidt, Chester W., John W. Shaffer, Howard I. Zlotowitz, and Russell S. Fisher. 1977. "Suicide by Vehicular Crash." *American Journal of Psychiatry* 134:175–78.
- Shneidman, Edwin S. 1980. *Voices of Death*. New York: Harper and Row.
- . 1996. *The Suicidal Mind*. Oxford, England: Oxford University Press.
- Shneidman, Edwin S. and Norman L. Farberow. 1957. *Clues to Suicide*. New York: McGraw-Hill.
- Sirken, Monroe G., Harry M. Rosenberg, Frances M. Chevarley, and Lester R. Curtin. 1987. "The Quality of Cause-of-Death Statistics." *Journal of Public Health* 77:137–39.
- Starr, Paul. 1982. *The Social Transformation of Medicine*. New York: Basic.



- Strauss, Anselm. 1987. *Qualitative Analysis for Social Scientists*. Cambridge, England: Cambridge University Press.
- Timmermans, Stefan and Marc Berg. 2003. *The Gold Standard: The Challenge of Evidence-Based Medicine and Standardization in Health Care*. Philadelphia, PA: Temple University Press.
- Turner, Stephen. 2001. "What is the Problem with Experts?" *Social Studies of Science* 31:123–49.
- U.S. Public Health Service. 1999. *The Surgeon General's Call to Action to Prevent Suicide*. Washington, DC: U.S. Public Health Service.
- Vanatta, P. R. and C. S. Petty. 1987. "Limitations of the Forensic External Examination in Determining the Cause and Manner of Death." *Human Pathology* 18:170–74.
- Wekstein, L. 1979. *Handbook of Suicidology*. New York: Brunner/Mazel.