

Bodily signs and case history in Indian morgues: what makes a medico-legal autopsy complete?

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Abstract

In contemporary forensic medicine, in India, the label of ‘complete autopsy’ applies to a whole range of post-mortem examinations which can present considerable differences in view of the intellectual resources, time, personnel and material means they involve. From various sources, available in India and elsewhere, stems the idea that, whatever the type of case and its apparent obviousness, a complete autopsy implies opening the abdomen, the thorax and the skull and dissecting the organs they contain. Since the nineteenth century, procedural approaches of complete autopsies have competed with a practical sense of completeness which requires doctors to think their cases according to their history. Relying on two case studies observed in the frame of an ethnographic study of eleven months in medical colleges of North India, the article suggests that the ‘practical completeness’ of autopsies is attained when all aspects of the ‘history of the case’ are made sense of with regard to the observation of the body. Whereas certain autopsies are considered obvious and imply a reduced amount of time in the autopsy room, certain others imply successive redefinitions of what ‘complete’ implies and the realisation of certain actions which would not have been performed otherwise.

Key words: forensic medicine, India, medico-legal autopsy, ‘history of the case’, post-mortem examination

On the morning of 12 January 2014 I was interviewing Ahmed,¹ a senior resident in forensic medicine assigned to the morgue of a major public hospital of New Delhi, when the irruption of the police interrupted our conversation. The doctor was informed that the body of 30-year-old Nirmal was about to reach the morgue for a medico-legal autopsy. According to the police and as reported by the medico-legal certificate (MLC) contained in the case file, as often in this centre which mostly deals with accident casualties and victims of serious injuries, this was yet another case of ‘RTA’ – as ‘Road Traffic Accidents’ are usually called by death investigation agencies in India. After catching a brief glimpse of the MLC issued at the emergency ward, the doctor turned to me and explained that this would be an ‘obvious case’, for which he wouldn’t need to ‘look much’.

Ahmed: We can see that there's brain matter coming out. It's a head injury, so I don't have to look much in this case.

FP: What do you mean, you 'don't have to look much'?

Ahmed: Yes, because it's obvious that he's had a head injury and brain is coming out. So, I just have to rule out any poison, whether he was under the influence of alcohol at the time of crime or not.

FP: But you have to do a complete autopsy still?

Ahmed: Yes! In each and every case we have to do a complete autopsy. Whether it is obvious or not, it's mandatory.

All manipulations on Nirmal's dead body were, as usual, performed by the morgue attendant, which left Ahmed to move at his own convenience around the dissection table while logging his observations on a notepad. He recorded a few external injuries and some fractured ribs, but focused most of his attention on the head, as confirmed by the meticulous description he proposes in his report.

Diffuse subscalpal fracture of middle cranial fossa and left temporal bone is present. Extradural and subdural hematoma is present over left temporoparietal area. Generalised subarachnoid hemorrhage is present. Intraventricular bleeding in 3rd and lateral ventricles is present. Laceration of left temporal lobe is present.

Indeed, the observation of Nirmal's body by Ahmed did not require him to look much. All manipulations were operated by the assistant and Ahmed at no point thought it required him to put gloves on to proceed to ancillary dissections, like those of the spinal cord or of the coronary arteries. Both the external and internal examination of Nirmal's dead body were completed in the span of few minutes, at the end of which Ahmed and I were back at the doctors' office. As in the circumstances which surround Nirmal's death, certain combinations of contextual data and reported signs can be considered by doctors as entirely unambiguous. When brain matter oozes out of the victim's head, in the context of a hospital which mostly receives victims of accidents, it seems obvious that the cause of death will be reported as 'head injury'. Although the amount of time spent in the autopsy room by Ahmed was low, as compared to the two hours or more that complex homicide cases can require when they involve describing clothes or retrieving a firearm bullet, Ahmed left his assistant to close Nirmal's body with the feeling of a mission regularly accomplished. His autopsy was 'complete' as per, for instance, the sense of Reddy's definition, which stipulates that, in a complete autopsy, 'all the body cavities should be opened, and every organ must be examined'.²

Despite the remarkable difference in intellectual resources, time, personnel and material means respectively involved in 'obvious cases' such as Nirmal's and in complex homicidal cases such as Manoj's (which I describe further in this article), doctors declare that they conduct complete autopsies in both types. Such an affirmation leaves the observer wondering what this common feature – called 'completeness' – consists in and how it can describe both the cases where doctors do not need to look much and those which involve all possible ancillary dissections,

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chemical tests and microscopic analyses. One answer could consist in blaming Ahmed's autopsy for having been insufficiently thorough, although complete in view of the usual standards. However, Ahmed considered that nothing was left to be observed when he left the autopsy room. He confidently wrote the cause of death in his report and even commented on the compatibility with the narrative of accident, a practice that doctors restrain to the situations in which they are certain of their conclusion. This post-mortem report will most probably serve its institutional purpose without a hitch.

Death is due to cranio-cerebral damage and its sequels consequent upon blunt force/surface impact to head. However, viscera [have] been preserved to rule out common poisoning and intoxication such as alcohol. The injuries are ante mortem in nature and could be possible in the manner as alleged.

The medico-legal system of India involves a broad definition of the medico-legal case. As opposed to certain systems in which clinical history or an external pre-examination of the body may exempt the evisceration of internal organs, in India, dead bodies end up being subjected to a complete medico-legal autopsy in suicides, homicides, and also in numerous cases of accident. From various sources, available in India and elsewhere, stems the idea that, whatever the type of case and its apparent obviousness, a complete autopsy implies opening the abdomen, the thorax and the skull and dissecting the organs they contain. However, from a socio-historical and ethnographic perspective, completeness for autopsies appears more as a required condition for the admissibility of medico-legal evidence in courts than a well-defined medical idea. The reference to complete autopsies in medico-legal manuals and textbooks therefore seems to directly participate in the legitimization of the autopsic procedure with respect to judges, for whom such a thing as a 'complete autopsy' exists and is clearly defined.

As will be shown by the case of Manoj's autopsy, doctors' practical sense of completeness for an autopsy cannot be apprehended merely in the light of procedural aspects. Sometimes they can think their autopsy is incomplete even after having proceeded to all the required operations and observations. With the analysis of their practice emerges the idea that, for medico-legal experts, an autopsy is complete when the 'history of the case' introduced by inquest papers and witness testimonies is made sense of with regard to the observation of the body. This criterion is valid whether doctors face an obvious case or whether they require resorting to specific ancillary actions and knowledge to figure out the cause of death.

For its demonstration, this article relies on materials collected between 2013 and 2014, on a total duration of eleven months, in the frame of an ethnographic study of the practice of forensic medicine in medical colleges. During my visits, I was received at the morgues of three government hospitals of North India where I could interview forensic experts about issues of interpretation in their professional practice and observe them at work. The type of partnership I constructed to conduct this study depended on each institution. Agreements ranged from an informal arrangement to an official 'observership' granted after the evaluation of

a heavy application file by a board. In these three settings I was given the permission to attend both clinical and post-mortem cases of medico-legal examination. I documented and discussed both Nirmal's and Manoj's autopsy cases during these periods in the field.

Objectivity and the 'history in the case' in colonial and postcolonial India

In the former presidential cities of Madras, Bombay and Calcutta, local governments were entitled by the Constitution of the East India Company to appoint coroners whose duties and powers with respect to the investigation of unnatural and suspicious deaths were the same as those of coroners in England.³ However, after the prerogatives of the Company were appropriated by the Crown in 1858, the system of death inquest preferred for the British Raj was mostly based on an investigation conducted by the police.⁴ Suffused with a vision of Indian personality in terms of what Elizabeth Kolsky called 'perceptions of native deceit', colonial administrators such as Thomas B. Macaulay or James F. Stephen proved to be deeply concerned about the alleged unreliability of the populations of India and about its implications for colonial justice. In their eyes, such a trait made it seemingly impossible to adapt to the context of India certain of the fundamental features of the English judicial system.⁵ In England, the association of popular juries with a coroner whose prerogatives would not solely be based on a medical expertise – thus not weighing excessively on juries' perceptions and decisions – was considered a cornerstone of democracy,⁶ but the model of governance considered necessary for India was more that of an 'enlightened despotism' than that of a democracy.⁷ Seen as 'antiquated, expensive, cumbersome and altogether unsuitable for Indian conditions' as well as 'politically dominated and corrupt' in its experience of the presidencies,⁸ the coroners' system was never transposed to the full scale of the British Raj and was progressively annulled in Madras, Calcutta and Bombay.

Even with the institution of coroners aside, the administration of justice was still deemed to face issues related to what the Bengal Government called in 1827 the 'notorious disregard for truth, so generally displayed by the natives in giving evidence'.⁹ In the context of colonial India, this association of medical jurisprudence with the idea of truth was characteristic of the way many scientific fields ended up crystallising a British sense of superiority and of responsibility towards colonial populations.¹⁰ The 'uncertainty of general evidence in India'¹¹ was to be challenged, thanks to techniques of truth made available to judges by several codes passed after the Sepoy Mutiny of 1857, particularly the Indian Evidence Act (1872) and the Criminal Procedure Code (1861), including medical as well as other types of scientific expertise.¹² The founding texts of medical jurisprudence, written specifically in view of the case of India, deeply reek of the expected role of the discipline with regard to the elucidation of criminal cases. However, for all that it was expected to assist judges in their duty to 'sift the truth from the falsehood', medical jurisprudence was also affected by the same factors.

The history of the case: a bias for the expert?

Isidore B. Lyon's *Medical Jurisprudence for India*, in a section entitled 'Difficulties in detecting crime in India medico-legally', raises the tension between 'a principle, in England and in India, that the medical officer should be furnished with as full particulars as possible to assist him in finding out the true cause of death' and a certain restraint for the medical officer to rely 'for such important information on the report of untrained persons',¹³ the police, who 'are drawn from the ranks of the masses and are still credited with suppressing evidence for a monetary consideration, as well as with extorting false confessions by torture [...], all tending to obscure the truth'.¹⁴ This restraint seems to be due, in part, to what Norman Chevers describes as the 'prevalent idea [among judges], that it is merely necessary to place a body, however decomposed, before a medical man to enable him to reveal fully the cause of death'.¹⁵ To shed light on the way judges may reflect on this idea, Lyon, like Chevers before him, mentions a famous judgment by a Sessions judge of Kanpur for whom providing the medical officer with complete information about the circumstances of death 'would interfere with a principle of criminal justice, and would be analogous to putting leading questions, the answers to which would not be evidence'. Although this judgment was finally overturned by a higher court, 'there [was]', according to Chevers, 'reason to believe that a similar view of the question [was] entertained by other judicial officers'.¹⁶

To stress the absurdity of the view that putting a dead body in front of a doctor is sufficient for him to conduct an autopsy on it, Chevers concludes that expecting a clear cause of death in a total absence of information is 'one of the most unfair and most unsafe questions that can be put to a medical man'. Erroneous and partial information was considered by doctors as better than no information at all, because 'no surgeon can be fairly expected to unravel every tissue of a body from which life may have been expelled by any one of a hundred causes [...], the detection of every one of which would become an undertaking of greater and greater difficulty with every hour that elapsed after the departure of the vital heat'.¹⁷

Jaising P. Modi advises that doctors should nonetheless comply to judges' view of the autopsy as able to autonomously lead to the cause of death from bodily signs. According to his textbook, conducting complete autopsies as requested will enable doctors to 'avoid unnecessary and sometimes unpleasant cross-questions in court'.¹⁸ While he also reflects on the importance of completeness for autopsies, Lyon additionally supports an idea which is closer to the practical sense of completeness which this article introduces. In his eyes, the completeness of autopsies should drive the expert 'in a position to say, not only what was, but also, what was not, the cause of death'.¹⁹ Such considerations have henceforth been extended in contemporary recommendations addressed to medico-legal experts by authors who order complete autopsies 'to substantiate the truth of the evidence of eyewitnesses'.²⁰

Besides loosely attempting to define complete autopsies positively by mentioning the mandatory opening of the three main cavities of the human body, Reddy's and Modi's textbooks, which I have frequently seen on the desk at the morgue, oppose them to 'partial autopsies' such as those practised by pathologists to docu-

ment the anatomic changes related to a known condition – which do not necessarily require the examination of the whole body.²¹ Such autopsies could mislead the observer as to the cause of death: ‘evidence contributory to the cause of death may be found in more than one organ’.²² Similarly, certain medical examiners in the United States have famously shown their concern for the ‘mistake of performing an incomplete autopsy’²³ or for ‘the tragic consequence of a poorly performed, partial or superficial autopsy’, as ‘a sloppily done, incomplete autopsy is worse than none’.²⁴ Recent technological developments have not eroded, so far, the generally accepted superiority of traditional autopsies over alternative approaches of the determination of the cause of death, including various forms of partial autopsies such as the ‘needle autopsy’ or techniques based on medical imaging.²⁵ However, beyond opening the three main cavities of the body and observing all internal organs, there is, as of now, no exact agreement as to what a complete autopsy consists in.²⁶ This absence of agreement results not only from medical traditions and locally available material means, but also from the various roles which the autopsy and the history of the case can be assigned in each type of medico-legal system.

Several possible roles for the autopsy in death investigations

The way the history of the case is used in practice during a forensic autopsy in India can be understood only in light of the fact that an autopsy such as Nirmal’s would not have occurred in certain medico-legal systems, as a witnessed accident does not always constitute a medico-legal case. In India, medico-legal cases encompass an important range of situations²⁷ – including suicides, homicides, and also accidental deaths, dead body found by the police, deaths on arrival at a hospital – wider than in the United States and certain European countries.²⁸ To give an example, in France, cases of road traffic accident rarely lead to an autopsy, especially if witnesses were present at the time of occurrence.²⁹ The French system involves a pre-examination to assess the necessity of a full, internal autopsy, which leads to many autopsies being waived because the cause of death is deemed to have been found through other means than the autopsy. This system is a parent of the principle of ‘view and grant’ experimented in Scotland.³⁰ To continue the example of Nirmal’s death, Pounder *et al.*, supporters of the concept of view and grant, consider that when ‘police investigation of the circumstances establishes the causation and death is due to multiple injuries, there seems little point in dissecting the body to document the detail of the injuries, all the more so if the death is still certified as being due to “multiple injuries”’.³¹

Such arrangements are advocated when, in certain settings, the rate of medico-legal autopsies is considered too high.³² The validity of systems based on the elimination of autopsy in those cases for which a cause of death is already known, due to the availability reliable clinical data, has been backed up by a celebrated precedent. In his medical examiner’s office in Miami, whose mode of functioning he explains in a famous article of 1955,³³ Davis used to reject autopsies in cases related to hospital deaths, inasmuch he was of the opinion that ‘they had little to do with forensic pathology’.³⁴ Following this logic, the complete autopsy is a tool that can be used as a complement to measures such as a review of the available medical history,

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a strictly external medical examination etc. It fits the perspective that Vernand Adams summarises thus in the following statements.³⁵

The autopsy is just another laboratory test.
The autopsy does not give the cause of death.
Think like a doctor, not like a surgical pathologist.

The history of the case does not play the same role as the Indian system of death inquest. In India a case, once labelled as medico-legal, is mandatorily subjected to an autopsy. Possibilities to waive the autopsy are extremely limited and doctors have no authority in this regard.³⁶ Therefore, the history of the case is merely used by doctors to frame the autopsy they are about to conduct by knowing about the circumstances of the case, its psychological and social aspects, in an approach which has already been extensively documented by medical anthropologists in various domains,³⁷ especially when specific attention is paid to the narrative construction of medical opinions.³⁸ More recent sociological investigation leads to similar conclusions in medico-legal settings³⁹ as well as in certain other types of judicial expertise.⁴⁰

One substantial use for case history is in terms of management of the workload in a department. The actual number of bodies subjected to a medico-legal autopsy in India is lower than what the legal frame in place should actually lead to, as many deaths are not even reported to the authorities.⁴¹ Nonetheless, certain morgues are overburdened with forensic cases.⁴² In many departments of forensic medicine in India it is not exceptional to see one expert conduct several autopsies at the same time. Morgues face a lack of personnel, partly due to Indian medical students' lack of enthusiasm for the subject of forensic medicine and to the negative social image attached to mortuary facilities. For want of waiving 'obvious' cases, the history of the case can enable doctors to give priority to those cases which they estimate will require more time, the presence of other colleagues, ancillary dissections, a visit of the scene of occurrence or external laboratory tests. Hence, it is a tool in the management of the daily workload.

However, the importance of case history is mainly related to the fact that conducting autopsies 'blind' is described as 'patently impracticable, for every autopsy would have to be totally comprehensive [...] as there would be no means of knowing what was necessary and what was irrelevant'.⁴³ As an expert explained to me, 'in any kind of investigation, you have to have some kind of thought in your mind', and in this context 'the history basically provides the lead'. As in various kinds of medico-administrative evaluations,⁴⁴ the expert cannot follow a protocol without first having situated the person they deal with.⁴⁵ Against the flow of clichés according to which experts 'make the body speak',⁴⁶ the case of medico-legal experts corroborates the idea that their actions of description and interpretation of the body involve a complex intermingling of medical and non-medical facts. Certain doctors consider that their duty is located at a narrative level and explain that, as Manish says of his own practice, it comes down to 'try to reconstruct the event'. In practice, as I demonstrate by unfolding the case of Manoj's autopsy and

by contrasting it with that of Nirmal's, medico-legal experts consider their autopsies complete once the history of the case is made sense of vis-à-vis the observations on the body.

The dialogue with the history of the case

One morning in June 2013, in a small village of Himachal Pradesh, a crowd was gathered on the playground of a public school around the dead body of Manoj, a local farmer aged thirty-five. Warned that the dead body of Manoj was lying there lifeless, his brother, Suresh, immediately came to the scene of death and identified Manoj's dead body. Suresh therefore went to the closest police station to report his brother's death, which he deemed to be homicide. The police officer who received him filed a First Information Report under section 302 of the Indian Penal Code ('punishment for murder'). In his declaration Suresh not only described the means by which he had been informed of Manoj's death and what he saw at the scene of death. He also informed the police of the criminal liabilities that he thought were at stake in his brother's death. Manoj's wife, whose name is Anjali, was having an affair with another man. This element could explain, in Suresh's eyes, that Anjali would have killed Manoj with the assistance of an accomplice.

As the case was registered as a case of homicide, Manoj's cadaver was transferred to a local hospital for a medico-legal autopsy. Yet no one among the medical personnel of this hospital was specialised in forensic medicine. The doctor who received the case preferred to refer it to another location where it would be managed by a doctor specialised in forensic medicine. Hence, the next day the dead body was transferred to the morgue of the medical college where I was conducting my ethnographic investigation. The autopsy of Manoj's dead body was assigned to Manish, aged thirty, the only senior resident of the department forensic medicine and one of its three doctors.

Questioning Anjali's guilt

Upon the arrival of the police officer in charge of the investigation, Manish started by reading the inquest documents. He then asked the policeman several questions about the case and the results of the investigation, so that before even having seen the external appearance of the dead body the doctor had an idea in mind about the cause of death, and also about the manner (homicide) and mode of death (strangulation by ligature). He also deduced from this conversation that he would need to ensure the presence of a ligature mark around the neck so as to confirm the alleged mode of death.

On our way to the morgue Manish had time to think aloud about the case. According to him, it was unlikely that a man of thirty-five, *a priori* in a good physical condition, could be overpowered and strangled by a woman. He therefore explained that the accusation against Anjali could be false and that this murder could be unfairly attributed to Anjali. This idea that judicial institutions sometimes incriminate and condemn certain persons on charges of which they are wrongly accused contradicts his personal conception of fair justice.

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There is a culprit, if he is never brought behind the bars, I will never mind. But suppose the person is innocent, he should not be jailed. They are so many persons who are not being put behind the bars, but it is innocent persons that should not be. They should be free. This is the way we are working in spite of many constraints.

This hypothesis connected the case to the type of situation in which Manish believes more time is required, more interaction with the police and relatives and a visit to the scene of death, or at least pictures taken on the spot. Generally, accidental or suicide cases do not generally lead to such steps.

In those circumstances, what happens is that we are taking more time. First, we are taking the history from the police. Then I have knowledge of the scene of occurrence, then from the family members of the deceased. Then, obviously, from the witnesses of the inquest, also. What they have actually seen there.

Manish therefore arrived in the autopsy room with a highly specific purpose, not with merely a body to observe and the cause of a death to determine, not with only a history of murder to verify, but with the potential innocence of Anjali to document.

A weakened hypothesis of strangulation

Due to weather conditions and the fact that the autopsy occurred two days after Manoj's death, the body was in an advanced state of putrefaction when was laid on the dissection table. On the surface as well as inside, there were a few maggots, but the assistants were mostly chasing away hundreds of flies by carefully pouring water onto the body. One important aspect of the thanatomorphic changes resulting from the decomposition process of a dead body is that putrefactive bacteria spread through the fluids of the body, especially through blood vessels. Putrefaction therefore causes the skin to discolour and, in certain places, to peel off. Also, some blisters appear on the surface of the skin and putrefaction gases result in a swollen body. These phenomena blur the outline of the forms usually considered as pathological signs: ligature marks, contusions etc.

The examination of Manoj's dead body started with the external observation. The doctor took a few measurements, observed the clothes and identified two contusions on the forehead. Then he carefully observed the inflated neck of the victim, whose skin had almost entirely peeled off. The doctor looked for but could not identify an observable ligature mark. Aware that putrefaction had damaged the readability of external signs, he decided, exceptionally, to have the police officer come into the autopsy room, together with the identifiers, so as to be shown where they had seen these injuries. The three of them then pointed their finger to the neck. Although some traces were indeed present on the peeled surface of the neck, Manish considered that they were only the non-pathological aspect of the natural folds of the human neck, whose unusual appearance was the result of the skin's being removed at this location. He concluded that he was in no position to comment on the state of the muscles of the neck. This absence of evidence could neither corroborate the

hypothesis of a murder by strangulation, nor disqualify it. Nonetheless, it certainly increased the doubt in the doctor's mind as to the allegations that Anjali had strangled her husband. Ligature marks are obvious and classic evidence in any case of murder by strangulation with a rope, but were missing here.

Manish: When I was examining, the skin of the neck was completely peeled off. So, I was not able to appreciate the superficial injuries, if any. [...] It was not possible to comment on the status of the injury. [About the police and identifiers summoned to the autopsy room] They should have guided me. That was what I was expecting from them.

FP: But they purely focused on the neck.

Manish: Yes, they were more worried about the neck. Here, I am not finding anything over the neck.

After the opening of the abdominal and thoracic cavities, in which most of the organs were found in a liquefied state, an important stage in a case of strangulation is the observation of the hyoid bone, of the cricoid cartilage and of the thyroid cartilage. For this purpose, dissection of the upper respiratory tract is a crucial point. In Manoj's case, all these bones were found intact, which, again, neither corroborated, nor entirely ruled out the possibility of a strangulation of any kind.

And overall, this hyoid bone, this cartilage of the vocal box, larynx, and one more cartilage here, the cricoid cartilage below this larynx is there, it is [often] being fractured in cases of manual throttling. All these structures, they were intact. So, I was not getting any evidence in favour of fatal pressure over the neck. No gagging is there. Only one thing is left, that is, where no injury can be there, no gross injury can be there, a person will be overpowered and will be smothered with some soft object.

Finally, Manoj's tongue was entirely observable after the upper respiratory tract was withdrawn from the body. It was scrutinised for bite marks – usual in cases of strangulation – but found intact. Similarly, the lips too were found intact. The other internal organs of the abdomino-thoracic cavity were found liquified and any congestion, had it ever happened, was non-visible at the time of the autopsy. Consequently, the doctor considered that he could not corroborate asphyxia from those elements. The only relevant observation at the opening of the chest came from the dissection of the coronary arteries. Manoj was not affected by any atherosclerosis, which ruled out the possibility of a cardio-vascular accident.

Presence of signs of struggle, therefore a probable case of smothering

We then left the autopsy room for a short break, a moment which Manish used to smoke a few cigarettes and also to review the situation as far as the mode of Manoj's death was concerned. The absence of strangulation marks, although it could not entirely imply that a strangulation had not occurred, nevertheless shook the credibility of the history. As the version narrated by the police implicated Anjali on an uncertain material basis, Manish considered that he had to further ascertain the

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remaining possibility that Manoj had actually been smothered – or at least demonstrate he had been assaulted. The condition for establishing the latter was to shed light on signs of physical struggle.

We had already spent more than one hour in the autopsy room, and the observation stage could have been considered complete at that point, as the three cavities had been opened and all organs observed. However, the doctor had not yet ‘reconstructed the history’. He therefore went back to the autopsy room with no other objective than to confirm that Manoj had been assaulted before dying. Whereas the attendant was already about to close Manoj’s body, Manish took a scalpel to incise the stains present on the inner aspects of the thighs and arms, locations where injuries are considered more likely to be caused by an assault than by a fall. The incision, once compared to incised areas of non-stained skin, enabled the doctor to confirm a layer of clotted blood infiltrated beneath the external layers of skin.

It is likely that broken cricoid and hyoid bones together with the presence of a distinct ligature mark around the neck would have been more than sufficient to confirm a case of strangulation. It was precisely their absence which originated the need for more pathological signs to be made visible and reported.

We had checked out for each and everything, except for some contusions. We confirmed, on thighs, on the arms, and two contusions over this frontal eminence. All these, especially contusions over inner aspect of the thighs, they are not possible if somebody falls. If somebody falls, then, obviously, some abrasions or grazes will appear over the contusion, contused area. But the overlaying skin was intact, altogether. That thing gives hint towards the fact this has been inflicted through assault.

By the end of the dissection the doctor had, thanks to his last observations on the exterior of the body, reached the conclusion that Manoj had been assaulted. Although he could have written the report immediately after the autopsy, Manish nonetheless insisted on having the pictures of the scene of death handed over to him on the next day. As if the autopsy, in a way, was not yet complete, the doctor told me before leaving his office that he was ‘on the demarcation line’. Although he had developed a few certainties, he still didn’t know what to think of Anjali’s guilt, nor did he know the material with which Manoj had been asphyxiated.

The outbreak of wood dust

The next day, Manish told me he could not sleep the whole night, preoccupied as he was by the case. When, later in the morning, he was brought the CD containing the pictures taken by the police at the scene of crime, he immediately opened his laptop to view its content. In the very first images, he observed with satisfaction piles of wood dust in the corner of a room.

Incidentally, a little wood dust had indeed been found during the autopsy around the victim’s nose, as the doctor reminded me by showing me the pictures of the autopsy. At the time of autopsy this had barely been noticed, as the dust could have resulted from any of the numerous manipulations of the body which occurred from the moment the body was recovered at the scene of crime to its arrival on the

dissection table. Now, the comparison enabled the presence of dust to emerge as key evidence.

I was stunned. The photographs of one room, in the interior of one room, one heap of that dust of the wood was lying there [...]. I could see some of the traces of the wooden dust.

Whereas pictures taken at the scene of crime replaced a visit to the spot, pictures of the dead body served as an extension of the body, from the official moment of autopsy. Completeness was reached when, at the end of several cycles of narrative reconfiguration, it appeared that Manoj had been assaulted by his wife and an accomplice (probably her lover), that they had used wood dust to smother him after a struggle, and that the hypothesis of strangulation arose from a misinterpretation of putrefactive artefacts by third parties. Contrary to Ahmed's autopsy of Nirmal's body, which was complete immediately after leaving the dissection room, making sense of the set of positive and negative signs seen on Manoj's body required the doctor to prolong his investigation. Using the spaces of the report pro forma which propose to order the observations by body part, Manish stated all the elements of the reasoning journey: an intact hyoid bone, the presence of contusions and that of wood dust, not for the sake of exhaustiveness, but in order to respond to the police version (of strangulation) and to sustain his own theory of smothering after struggle.

Conclusion

By adding, as Ahmed did, that the medical cause of death is 'compatible with the alleged history' to the conclusion of a post-mortem report, or by mentioning an element like wood dust because it directly relates to the police hypotheses of the history of the case, medico-legal experts confirm that they seek to say more than what a mere observation could enable them to. Written forms of restitution bear the mark of medico-legal experts' steps to help their readers to understand the medical facts under consideration and their signification in terms of criminal liability and intentionality.⁴⁷ In this conclusion, I would like to raise the question of the judicial implication of this practical sense of completeness for medico-legal cases, which is related to a full narrative reconstruction by experts and not to the mere application of a procedure.

Specialists in forensic medicine such as Manish regret that medico-legal experts in India are not asked for more in autopsy cases. The reflection that they engage in order to determine the medical cause of a death relies on a reconstruction of the circumstances of occurrence and some thinking about what forensic medicine calls 'the manner of death'.⁴⁸ From the judiciary's point of view, such claims echo a recurrent concern, in India as elsewhere, about the importance for medical evidence to strictly remain non-binding for the judicial decision.⁴⁹ Comments of the Indian Evidence Act insist that 'the evidence of a doctor conducting post mortem without producing any authority in support of his opinion is insufficient to grant

conviction to an accused',⁵⁰ which gives space for the judge's appreciation to admit or reject medical evidence.

However, in India the judiciary can be overburdened with written documents, but prove helpless when confronted by the deposition of 'hostile witnesses' whose last declarations contradict their original claims – after, for instance, a settlement outside court – and constrain a prosecutor to drop a case.⁵¹ Singhal summarises this situation by saying that 'where there is glaring conflict between medical and oral evidence, the prosecution case must fail'.⁵² Even if medico-legal experts were officially entitled to specify, say, the manner of death, a question would remain regarding the lines to be followed in order to consider the integration, and the status in the Indian courts, of medical evidence that is acknowledged not merely as a technical opinion but as the fruit of an investigation.

Notes

- 1 To preserve their anonymity, the actual names of the protagonists mentioned in this article have been replaced by fictitious ones.
- 2 N. K. Reddy, *The Essentials of Forensic Medicine and Toxicology* (Hyderabad, K. Suguna Devi, [1973] 2012), p. 92.
- 3 J. M. Jentzen, 'Death and Empire: Legal Medicine in the Colonization of India and Africa', in P. Bala (ed.), *Medicine and Colonialism: Historical Perspectives in India and South Africa* (London and New York, Routledge, [2014] 2016), pp. 159–74.
- 4 R. G. Menezes, M. Arun and K. Krishna, 'Death Investigation Systems: India', in J. Payne-James and R. W. Byard (eds), *Encyclopedia of Forensic and Legal Medicine* (Oxford, Elsevier, [2005] 2015), vol. 2, pp. 18–24.
- 5 As was the case for the system of trial by jury. M. J. Wiener, *An Empire on Trial: Race, Murder, and Justice under British Rule, 1870–1935* (Cambridge, Cambridge University Press, 2009).
- 6 I. Burney, *Bodies of Evidence: Medicine and the Politics of the English Inquest, 1830–1926* (Baltimore, MD, The Johns Hopkins University Press, 2000).
- 7 B. Wright, 'Codification, Macaulay and the Indian Penal Code. The Legacies and Modern Challenges of Criminal Law Reform', in C. W. Chan, B. Wright and S. Yeo (eds), *Codification, Macaulay and the Indian Penal Code: The Legacies and Modern Challenges of Criminal Law Reform* (Surrey and Burlington, Ashgate, 2011), pp. 19–58.
- 8 S. M. Das Gupta, 'Unnatural Death Investigation in India: A Plea for the Introduction of a Medical Examiner System of Inquest', *The American Journal of Forensic Medicine and Pathology*, 7:2 (1986), 133–6.
- 9 Bengal Government to the Court of Directors, 22 February 1827, quoted by E. Kolsky, *Colonial Justice in British India: White Violence and the Rule of Law* (Cambridge, Cambridge University Press, 2010), p. 109.
- 10 D. Arnold, *Science, Technology and Medicine in Colonial India* (Cambridge, Cambridge University Press, 2000). See also D. Kumar, *Science and the Raj, 1857–1905* (Delhi, Oxford University Press, 1997) and T. Metcalf, *Ideologies of the Raj* (Cambridge, Cambridge University Press, 1998).

- 11 The phrase is from N. Chevers, *A Manual of Medical Jurisprudence for Bengal and the North-Western Provinces* (Calcutta, F. Carbery, Bengal Military Orphan Press, 1856), p. 26.
- 12 Kolsky, *Colonial Justice*, p. 120.
- 13 I. B. Lyon, *Medical Jurisprudence for India, with Illustrative Cases* (Calcutta, Thacker, Spink and Co., 1904), p. 16.
- 14 *Ibid.*, p. 18.
- 15 Chevers, *A Manual of Medical Jurisprudence*, p. 19.
- 16 *Ibid.*, p. 22.
- 17 *Ibid.*, p. 20.
- 18 J. P. Modi, *A Textbook of Medical Jurisprudence and Toxicology* (Calcutta, Butterworth & Co., 1920), p. 46.
- 19 Lyon, *Medical Jurisprudence*, p. 81.
- 20 Reddy, *The Essentials of Forensic Medicine*, p. 92.
- 21 R. B. Kotabagi, S. C. Charati and D. Jayachandar, 'Clinical Autopsy vs. Medicolegal Autopsy', *Medical Journal Armed Forces India*, 61:3 (2005), 258–63.
- 22 Reddy, *The Essentials of Forensic Medicine*, p. 92.
- 23 Quoted from Alan Richards Moritz. W. R. Oliver, 'Moritz Revisited: Modern Mistakes About How We Think About Forensic Pathology', *Academic Forensic Pathology* 5:2 (2015), 186–200.
- 24 L. Adelson, 'Symposium on Autopsy and the Law. The Anatomy of Justice', *Bulletin of the New York Academy of Medicine*, 47:7 (1971), 745–57.
- 25 E. W. Benbow and I. S. D. Roberts, 'The Autopsy: Complete or Not Complete?', *Histopathology*, 42:5 (2003), 417–23. It is also important to mention another technique labelled as 'autopsy' and whose purpose is to register a cause of death: the 'verbal autopsy'. However, this approach to the determination of the cause of death is restricted to epidemiological purposes. Besides, the validity of these methods is being increasingly questioned. D. Butler, 'Verbal Autopsy Methods Questioned: Controversy Flares over Malaria Mortality Levels in India', *Nature*, 467 (2010), 1015.
- 26 E. W. Matshes, C. M. Milroy, J. L. Parai, B. Sampson, R. R. Reichard and E. O. Lew, 'What Is a Complete Autopsy?', *Academic Forensic Pathology*, 1:1 (2011), pp. 2–7.
- 27 Menezes *et al.*, 'Death Investigation Systems: India'.
- 28 J. Pinheiro, 'Introduction to Forensic Medicine and Pathology', in A. Schmitt, E. Cunha and J. Pinheiro (eds), *Forensic Anthropology and Medicine: Complementary Sciences From Recovery to Cause of Death* (Totowa, Humana Press Inc. 2006) pp. 13–37.
- 29 D. Malicier, 'Les indications de l'autopsie médico-légale en France', *Bulletin de l'Académie Nationale de Médecine*, 185:5 (2001), 839–48.
- 30 D. Pounder, M. Jones and H. Peschel, 'How Can We Reduce the Number of Coroner Autopsies? Lessons from Scotland and the Dundee Initiative', *Journal of the Royal Society of Medicine*, 104:1 (2011), pp. 19–24; G. Ruttly, R. Duerden, N. Carter and J. Clark, 'Are Coroners' Necropsies Necessary? A Prospective Study Examining whether a "View and Grant" System of Death Certification Could Be

- Introduced into England and Wales', *Journal of Clinical Pathology* 54:4 (2001), 279–84.
- 31 Pounder *et al.*, 'How Can We Reduce the Number of Coroner Autopsies?', p. 22.
 - 32 Despite severe criticisms. For instance, see S. Leadbeatter, D. James and A. Davison, Review of Ruttly *et al.*, 'Are Coroners' Necropsies Necessary? A Prospective Study Examining whether a "View and Grant" System of Death Certification Could Be Introduced into England and Wales', *Journal of Clinical Pathology*, 55:11 (2002), pp. 878–9. Another critical perspective would focus on how the principle of 'view and grant' can fail to correctly classify certain natural deaths: M. B. Nashelsky and C. H. Lawrence, 'Accuracy of Cause of Death Determination without Forensic Autopsy Examination', *The American Journal of Forensic Medicine and Pathology*, 24:4 (2003), 313–19.
 - 33 J. H. Davis, 'The Future of the Medical Examiner System', *The American Journal of Forensic Medicine and Pathology*, 16:4 (1955), 265–9.
 - 34 J. M. Jentzen, *Death Investigation in America: Coroners, Medical Examiners, and the Pursuit of Medical Certainty* (Cambridge, MA and London, Harvard University Press, 2009), p. 90. This opinion has been supported by specific research since, for example, I. A. Robinson and N. J. E. Marley, 'Factors Predicting Cases with Unexpected Clinical Findings at Necropsy', *Journal of Clinical Pathology*, 49:11 (1996), 909–12.
 - 35 V. I. Adams, *Guidelines for Reports by Autopsy Pathologists* (Totowa, Humana Press, 2008), p. 44.
 - 36 Menezes *et al.*, 'Death Investigation Systems: India'.
 - 37 N. Dodier, *L'expertise médicale. Essai de sociologie sur l'exercice du jugement* (Paris, Métailié, 1993); N. Dodier, 'Clinical Practice and Procedures in Occupational Medicine: a Study of the Framing of Individuals', in M. Berg and A. Mol (eds), *Differences in Medicine. Unraveling Practices, Techniques, and Bodies* (Durham, NC and London, Duke University Press, 1998), pp. 53–85; B. F. Saunders, *CT Suite: The Work of Diagnosis in the Age of Noninvasive Cutting* (Durham, NC, Duke University Press, 2009).
 - 38 P. Atkinson, *Medical Talk and Medical Work* (London, Sage Publications, 1995); C. Mattingly, *Healing Dramas and Clinical Plots. The Narrative Structure of Experience* (Cambridge, Cambridge University Press, 1998).
 - 39 R. Juston, 'Comment une tache de sang devient-elle une preuve ? Ingrédients et recettes des preuves médico-légales', *Droit et société*, 2 (2016), 395–416; S. Timmermans, *Postmortem. How Medical Examiners Explain Suspicious Death* (Chicago, The University of Chicago Press, 2006).
 - 40 B. Dupret, *Adjudication in Action. An Ethnography of Law, Morality and Justice* (Farnham, Ashgate Publishing, 2011).
 - 41 I. Khandekar, *Constitutional Validity of Police Officials Existing Practice of Ordering Post-mortem Examination vis-à-vis 174 CrPC: A Cause of Concern* (Wardha, self-published, 2015), p. 4.
 - 42 In India, specialists consider that about 90 per cent of medico-legal autopsies are conducted by non-specialists. Khandekar, *Constitutional Validity*, p. iii.

- 43 P. Saukko and B. Knight, *Knight's Forensic Pathology Fourth Edition* (Boca Raton, FL, CRC Press, 2016), p. 12.
- 44 N. Dodier, 'Expérience privée des personnes et expertises médico-administratives. Une enquête dans la médecine du travail', *Sciences sociales et santé*, 9:2 (1991), 79–121.
- 45 D. Fassin, 'Quand le corps fait loi. La raison humanitaire dans les procédures de régularisation des étrangers', *Sciences sociales et santé*, 19:4 (2001), 5–34.
- 46 This stereotype is also reproduced by the forms which doctors use as a basis for their medico-legal reports. Each department has its own model, but all follow a division between a description of all body parts and an inference which is the conclusion as to the cause of death. The presentation suggests that the diagnosis as to the cause of death is deduced from the doctor's reported observations on the body, and that, at the exception of the samples which are officially sent for external analysis by a laboratory specialised in pathology or in toxicology, the cause of death can be found merely thanks to the elements presented to the expert within the walls of the autopsy room.
- 47 F. Provost, 'Un récit effacé. Reconstruction et restitution narratives dans l'expertise médico-légale en Inde', *Cahiers d'anthropologie sociale*, 13 (2016), 135–51.
- 48 S. Sharma and S. Bajpai, 'Medicolegal Death Investigation in India: an Overview', *Academic Forensic Pathology*, 5:3 (2015), 443–6.
- 49 L. Dumoulin, *L'expert dans la justice. De la genèse d'une figure à ses usages* (Paris, Economica, 2007), p. 8.
- 50 *The Indian Evidence Act* (New Delhi, Universal Law Publishing, [1872] 1973), p. 25.
- 51 D. Berti, 'Pouvoirs locaux et contraintes judiciaires dans une affaire de viol en Inde', *Diogenès*, 239–40 (2013), 139–65.
- 52 M. L. Singhal, 'Medical Evidence and its Use in Trial of Cases', *Journal of the Judicial Training and Research Institute (JTRI Journal)* 3 (1995), <http://ijtr.nic.in/articles/art28.pdf>.