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Forensic evidence in atrocity trials: A risky sampling strategy?

Caroline Fournet

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Abstract

In the light of the recent judgments issued by the International Criminal Court (ICC), including two acquittals and one very recent condemnation of the accused on all charges, analyzing and assessing evidentiary practice before the Court is all the more pressing. This article focuses on one particular type of evidence used by the Prosecution, namely, forensic evidence, to critically review how it has been used so far at the ICC and consider whether the prosecutorial strategy of focusing on a certain sample of crimes is finally paying off.

Keywords

International Criminal Court, atrocity trials, forensic evidence, expert witnesses.

The use of forensic evidence – that is, evidence ‘obtained through scientific testing’ (Brammertz and Jarvis, 2016: 157, note 291) – in international criminal justice is not a new occurrence. Following the war which devastated the Former Yugoslavia, one of the reactions of the international community was to launch an unprecedented scientific search for the dead victims. This search served a humanitarian purpose of identifying the victims² as well as a judicial purpose of establishing the commission of international crimes, namely, war crimes, crimes against humanity and genocide.

The forensic search in Bosnia-Herzegovina rapidly revealed that the perpetrators had made an extensive use of mass graves to dispose of the bodies of their victims. The subsequent forensic analyses of these graves unveiled a particular feature: the strategic use of a pattern of mass graves with primary, secondary and sometimes tertiary locations. Put differently, perpetrators used primary graves to place individuals ‘soon after their deaths’ (*Blagojević and Jokić* trial judgment, 2005: para. 381; Crews, 2005) and secondary (and tertiary) ones to later rebury the same individuals (*Blagojević and Jokić* trial judgment, 2005; *Mladić* trial judgment, 2017: para. 2990). To be exposed, this pattern required ‘a combination of forensic excavation, examination of body parts, artefacts, soil samples and DNA’ to ‘confirm the link’ between the graves (Klinkner, 2016: 501). This particular situation prompted the International Criminal Tribunal for the Former Yugoslavia (ICTY) to resort to assistance via the testimonies of forensic experts:³ archaeologists who excavate mass graves, collect and collate human remains and personal effects, and preserve the evidence; anthropologists who identify

¹ The author wishes to thank Suzanne Schot, PhD candidate at the University of Groningen, for her help in the conduct of the empirical analysis of transcripts.

² With the work of the Bosnian Missing Persons Institute and that of the International Commission on Missing Persons, 6,982 out of the 8,372 Srebrenica victims have now been found and identified. By July 2019, 6,572 victims had been buried in Potočari. Statistics as of July 2019. Available at: <https://www.icmp.int/wp-content/uploads/2017/06/srebrenica-english-2019.pdf>, accessed 27 July 2019.

³ In the *Popović* case, the ICTY Trial Chamber defined an expert witness as: ‘a witness that “has at his or her disposal the special knowledge, experience, or skills needed to potentially assist the Trial Chamber in its understanding or determination of issues in dispute”. One of the distinctions between an expert witness and a fact witness is that due to the qualifications of an expert, he or she can give opinions and draw conclusions, within the confines of his or her expertise, and present them to the Trial Chamber. Furthermore, while a non-expert witness may be “called to testify about the crimes with which the accused is directly charged”, the testimony of an expert witness with special knowledge in a specific field is “intended to enlighten the Judges on specific issues of a technical nature”.’ *Popović et al.* decision on defence Rule 94bis, 2007: para. 23. See generally, Appazov, 2016.

human remains; and pathologists who determine the cause of death.⁴ It is highly probable that, if it wasn't for the use as admissible evidence of the forensic analyses of the mass graves, the Tribunal would have overlooked one of the key features of the criminal *modus operandi*.

Before the ICTY, the forensic expert witness testimonies were instrumental in supporting the Prosecution's case and in defeating certain defence arguments. One line of defence was to explain the disturbance of primary mass graves and the reburials into secondary locations by 'post-combat sanitation projects' (e.g. *Mladić* trial judgment, 2017: para. 2989). Another defence claim was to pretend that the corpses buried were those of combatants who had died in the course of combat. Such claim was supported by the fact that the great majority of the victims in the graves were male of military age – a precise selection within the targeted population which conveniently allowed the perpetrators to maintain that these corpses were all war casualties. It is precisely thanks to the forensic reports submitted as evidence before the judges that these defence arguments failed. By relying on the scientific analyses of mass graves, the Tribunal was able to deconstruct the strategy put in place by the perpetrators to avoid guilty verdicts. It notably linked the pattern of mass graves to the perpetrators' intent to destroy the group or, in other words, to their genocidal intent (see Fournet and Siller, 2015; Klinkner, 2016; Schmitt, 2002). The forensic evidence enabled the ICTY to establish that the individuals buried in the mass graves were Bosnian Muslim civilian men of military age⁵ and that they thus all belonged to one of the protected groups under the Genocide Convention (see *Krstić* trial judgment, 2001: paras 73-79; *Karadžić* trial judgment, 2016: paras 5255, 5272, 5342, 5346, 5519; *Mladić* trial transcripts, 24 June 2015: 36589, 36251, 36287; *Mladić* trial judgment, 2017: para. 2816).⁶

In its first conviction for genocide in the *Krstić* case, the ICTY Trial Chamber found that '[t]he forensic evidence presented by the Prosecution provides corroboration of survivor testimony that, following the take-over of Srebrenica in July 1995, thousands of Bosnian Muslim men from Srebrenica were killed in careful and methodical mass executions' (*Krstić* trial judgment, 2001: para. 79). The medico-legal analyses resulting from the exhumation of the mass graves were instrumental in defeating the combatant claim. They allowed the Chamber to determine that the victims were civilian Bosnian Muslim military-aged men (*Krstić* trial judgment, 2001: paras 74-75) – a decisive element for the qualification of genocide – and to understand the strategic pattern of mass graves:

'Most significantly, the forensic evidence presented by the Prosecution also demonstrates that, during a period of several weeks in September and early October 1995, Bosnian Serb forces dug up many of the primary mass gravesites and reburied the bodies in still more remote locations. [...] *Such extreme measures would not have been necessary had the majority of the bodies in these primary graves been combat victims.*' (*Krstić* trial judgment, 2001: para. 78, emphasis added).

⁴ On the composition of exhumation teams and the distinct roles (although sometimes played by the same person) of forensic archaeologists, pathologists, and anthropologists as well as of diggers, photographers, and investigating officers, see generally Zanetta, 2009; Cox, Flavel, Hanson, Laver, and Wessling, 2008.

⁵ For a scientific demonstration that there were 'significant differences between the Bosnian and combat contexts', see Dussault, Hanson, and Smith, 2017.

⁶ According to the 1948 U.N. Genocide Convention, 'national, ethnical, racial or religious' groups are protected. See Convention for the Prevention and Punishment of the Crime of Genocide, United Nations, 1948. Approved and proposed for signature, ratification or accession by the General Assembly of the United Nations, Resolution 260 A (III) of 9 December 1948 (Entry into force: 12 January 1951), Art. II.

More recently, forensic evidence assisted the Trial Chambers in both the *Karadžić* and the *Mladić* cases to determine the number of victims, their gender, their civilian character as well as the cause and time of their deaths (*Karadžić* trial judgment, 2016; *Mladić* trial judgment, 2017; Baraybar and Gasior, 2006).

Perhaps following the practice largely initiated at the ICTY, the Office of the Prosecutor (OTP) at the International Criminal Court (ICC) has turned to forensic sciences as crime-based evidence to prove the occurrence of international crimes. As it will be exemplified below, ‘the recent tendency in international criminal justice has been to focus on a sample of outstanding crimes that can be used to demonstrate the widespread and systematic nature of crimes’ (Axboe Nielsen and Kleffner, 2011: 42). This trend may find an explanation in the global aspirations of the ICC, whose jurisdiction covers the territories of all the States Parties to its founding Statute (arts 13-15). In this context, the conduct of exhaustive investigations might well be an unrealistic expectation and the sampling strategy might be the only option and even that might prove challenging. Back in 2012, members of the OTP had already ‘expressed concern about the Court’s ability to increase or even sustain its current level of crime scene investigations and exhumations given the considerable challenges the Court faces gathering and analyzing such evidence’ (Berkeley Law, 2012: 3-4). This sampling trend is not without risk. International crimes are essentially mass violence crimes with a considerable number of victims and proving massiveness via a sample necessarily hinders an accurate determination of the number of victims and risks trivializing the crime. Judicially speaking, it could potentially lead to a failure to actually prove the mass crime before the Court, unless it is understood by the Parties and the Bench for what it precisely is: a sample.

Beyond establishing the occurrence of the crime, the Prosecution must also establish its linkage with the accused. Contrary to the domestic context in which forensic evidence might be the most reliable, if not the sole, way of connecting the ‘ordinary’ crime with the accused, it is arguable that forensic evidence as linkage evidence in the context of international crimes is more problematic: it might simply be too remote from the accused him/herself to establish his/her individual criminal responsibility. This might be particularly true for the ICC which aims at only trying individuals in a position of authority. Put differently, those who stand accused before the Court might actually not have participated in the actual perpetration of the crime, thus leaving no physical trace at the crime scene. It is thus probable that linkage evidence should be found elsewhere: ‘[a]mong other things, this involves identifying and reconstructing the key decisions, exchanges of information and orders between the persons present at the crime scene before, during, and after the commission of crimes. For political, military, and police structures, the chain-of-command must be reconstructed, with particular attention to joint structures’ (Axboe Nielsen and Kleffner, 2011: 43). The difficulties generated by establishing the criminal responsibility of those in command were recently demonstrated by two successive acquittals in The Hague (*Bemba Gombo* appeals judgment, 2018; *Gbagbo and Blé Goudé* trial judgment, 2019).

This particular context in mind, this article proposes to critically review the use of forensic evidence to assess how it has been used so far at the ICC. To conduct this review, all the ICC cases for which charges were confirmed at the pre-trial stage and for which trial has already started have been analyzed. So as to guarantee an empirical study as exhaustive as possible, all the publicly available transcripts and judgments have been explored and the following keywords have been used to search these documents: expert, scientific, forensic(s), anthropology, anthropologist, pathology, pathologist, psychiatry, psychiatrist, physician, doctor, medicine, medical, clinical, DNA, exhumation(s), autopsy(ies), identification(s),

corpse(s), body(ies), human remains, mass grave(s). The analysis of this case law – here presented chronologically – shows that, if no definitive single theory as to the use of forensic evidence at the ICC can be drawn, certain points of good practice – or in need of improvement – seem to be emerging, as detailed below.

At the ICC, forensic evidence is presented to the judges by in-court expert testimonies. According to the ICC Statute, judges ‘must be convinced of the guilt of the accused beyond reasonable doubt’ (art. 66(3)) and ‘[t]he onus is on the Prosecutor to prove the guilt of the accused’ (art. 66(2)). Crucially,

‘The Trial Chamber's decision shall be based on its evaluation of the evidence and the entire proceedings. The decision shall not exceed the facts and circumstances described in the charges and any amendments to the charges. The Court may base its decision *only on evidence submitted and discussed* before it at the trial’ (art.72 (2), emphasis added).

The rules regarding evidence are fairly flexible: what matters is that the evidence presented to the Court be relevant (*see* arts 69(3) and 69(4)). Consequently, the Rules of Procedure and Evidence (RPE) provide that ‘[e]vidence ruled irrelevant or inadmissible shall not be considered by the Chamber’(Rule 64(3)). Interestingly, quite a preponderant role is given to the Presiding Judge with respect to the conduct of proceedings and testimony, giving him/her the right to ‘give directions for the conduct of proceedings’, subject to which ‘the parties may submit evidence in accordance with the provisions of this Statute’ (art. 64(8); *see also* Rule 140(1)). At the Court, judges also have the right to intervene in the course of proceedings and to put questions directly to witnesses, including expert witnesses (Rule 140(2)(c)); a right which, as we will see below, judges have used with respect to forensic experts testifying before them, thereby indicating their interest for these testimonies and, perhaps, the importance of such evidence.

1. *Lubanga Dyilo* and *Katanga and Ngudjolo Chui*: a corroborating ‘material to be treated with care’

The *Lubanga Dyilo* trial was the first opportunity for forensic evidence to enter, albeit discreetly, the ICC courtroom. In an attempt to prove the criminal recruitment of children as soldiers, radiology and pediatric imagery were used for age assessment (*Lubanga Dyilo* trial transcripts, 26 January 2009: 17). The two medical experts heard by the Court – a pediatric radiologist and a pediatrician and forensic doctor – both recognized the difficulties in assessing age (*Ibid.*, 12 May 2009: 34-36; 13 May 2009: 20).

These inherent limits of scientific evidence were taken into account by the Trial Chamber which accepted ‘that *this material needs to be treated with care*, not least because analysis of this kind, based on X-rays, was principally developed to measure biological rather than chronological age’ ((*Lubanga Dyilo* trial judgment, 2012: para. 176, emphasis added) and concluded that ‘these forensic assessments of age lack precision, and they provide an inadequate basis, taken alone, for determining an individual’s age’ (*Ibid.*: para. 423). On appeal, the Appeals Chamber found that the Trial Chamber’s approach ‘was not unreasonable’ (*Lubanga Dyilo*, appeals judgment, 2014: para. 236), thereby acknowledging the inherent limits of this type of evidence and maybe warning that scientific evidence should be corroborating evidence and not the sole and decisive evidence in one case. If this could be seen as a rather realistic approach on the part of the Court, it could also be deemed fairly conservative. According to the RPE, there is no ‘legal requirement that corroboration is required in order to prove any crime within the jurisdiction of the Court’ (Rule 63(4)).

In the case against Katanga and Ngudjolo Chui, the Prosecution adopted for the sampling strategy mentioned earlier: in conducting exhumations in the Democratic Republic of the Congo with the acknowledged aim of using the findings as corroborating evidence to establish murder as a crime against humanity and as a war crime, the Prosecution expressly opted for a partial exhumation of human remains as it ‘did not see a need for a full exhumation’ (*Katanga and Ngudjolo Chui* trial transcripts, 25 November 2009: 64). The Defence did not hesitate to qualify this choice as one of the ‘flaws in the investigation’ (*Ibid.*, 21 May 2012: 33) and, when the Trial Chamber deemed ‘the probative value of the findings in the forensic experts’ reports [...] insufficient to warrant their late admission’ (*Ngudjolo Chui* trial judgment, 2012: note 266; *Katanga* trial judgment, 2014: note 104) and refused to admit them as evidence (*Katanga and Ngudjolo Chui* disclosure decision, 2009: paras 27-36) it became clear that this prosecutorial strategy had backfired. Both in acquitting Ngudjolo Chui and convicting Katanga, the Trial Chamber reminded the Prosecution of the importance of complete forensic investigations: ‘[i]t is equally desirable, whenever practicable, to make as many factual findings as possible, in particular forensic findings which are often crucial to the identification of victims, expeditiously and in the *loci in quo*’ (*Ngudjolo Chui* trial judgment, 2012: para. 117; *Katanga* trial judgment, 2014: para. 61). If the *Lubanga* case should serve as warning that forensic evidence should be corroborating, the *Katanga* and *Ngudjolo Chui* judgments should be seen as strong reminders that forensic investigations should nonetheless be as rigorous and complete as possible.

2. Bemba Gombo and Gbagbo and Blé Goudé: The non-use and misuse of forensic evidence

These reminders seem however to have remained unheard and forensic evidence was hardly used in the case against Jean-Pierre Bemba Gombo. It is thus unsurprising that, in its judgment of 21 March 2016 convicting the accused to 18 years of imprisonment, the Trial Chamber only anecdotally refers to forensic evidence (*Bemba Gombo* trial judgment, 2016: paras 477-79). This could have remained a mere observation if it wasn’t for the fact that, in an admittedly unexpected turn of events, the Appeals Chamber acquitted Jean-Pierre Bemba Gombo precisely for lack of convincing linkage evidence (*Bemba Gombo* appeals judgment, 2018). Yet, in the light of the subsequent acquittals of Laurent Gbagbo and Charles Blé Goudé, it is uncertain that a more systematic and exhaustive use of forensic evidence would have led to a different outcome.

In the trial of Laurent Gbagbo and Charles Blé Goudé, resort to forensic evidence was much more extensive to establish the crime of murder as a crime against humanity (*Gbagbo and Blé Goudé* trial transcripts, 29 January 2016: 24, 34). The Prosecution insisted that the crimes, as evidenced by forensic science, ‘were the continuation of the implementation of the common plan, conceived and developed by the two accused’ (*Ibid.*: 34). The Trial Chamber heard at length several forensic experts, including a forensic DNA scientist (*Ibid.*, 29 May 2017), an expert in forensic investigation of biological traces and DNA and in DNA kinship analysis (*Ibid.*), and several forensic pathologists, who notably testified on body preservation, the sealing of bodies in body bags and the storage of bodies (*Ibid.*, 11 September 2017; 11 October 2017; 17 January 2018; 19 January 2018). This however did not prevent the Trial Chamber from acquitting the two accused and, if these acquittals are the result of a combination of factors, certain lessons as to the use of forensic evidence may still be drawn from this case.

First, a reading of the transcripts reveals a limited understanding of forensic evidence on the part of both the Prosecution and the Defence. A striking feature of the testimonies of forensic experts seems to be their length and, although interesting, they did tend to resemble more general lectures on scientific evidence than specific testimonies on the case at hand (*e.g.* *Gbagbo and Blé Goudé* trial transcripts, 29 May 2017). The Prosecution also seems to have ignored the warning issued in the *Katanga* and *Ngudjolo Chui* judgments as to the risks of partial forensic evidence when it decided not to submit as evidence all the autopsy reports relating to the alleged victims of 15 March 2011 but only those of the bodies which had been identified, unconvincingly arguing that they ‘were simply trying to not overload [judges] with material that is not relevant and probative’ (*Ibid.*, 11 September 2017: 34). This strategy is also at odds with the position previously taken by the Pre-Trial Chamber according to which ‘there is no need to find and/or identify the corpse [...] it is not necessary for the Prosecutor to demonstrate, for each individual killing, the identity of the victim’ (*Bemba Gombo* decision pursuant to article 31(7)(a), 2009: para. 134). This limited understanding of the Parties was however counterbalanced by several interventions from the Bench who, in contrast, showed a more acute knowledge of forensic evidence and ensured that the focus on the case was maintained. For example, when the Defence objected to the use of a ‘List of Persons Exhumed’ ‘on the grounds that the exhumation exercise was conducted in 2014, [thus] outside the time frame of the charges’, Presiding Judge Tarfusser rejected this objection because it is ‘obvious’ that a mass grave can only be found after (*Gbagbo and Blé Goudé* trial transcripts, 1 May 2017: 54-55). He also intervened on several occasions to avoid unnecessary digressions. When an expert witness was asked by the Prosecution to explain ‘the term ISO 17025 standards’, the Judge pointed out that ‘the ISO certificate is something which is known, what is an ISO, the quality, the quality certification. I think we should go to the report’ (*Ibid.*, 29 May 2017: 11). When a forensic pathologist was asked to describe his functions, the Presiding Judge unequivocally recalled that ‘we all know these things. [...] It’s not the first time that we see or we have in front of us a forensic pathologist’ (*Ibid.*, 11 September 2017: 10). When the Defence counsel asked an expert witness to explain the concept of cognitive bias, the Presiding Judge simply refused the question: ‘No, please. We know what that is. If he explains it to you, I’m fine [...] I just repeat that we are not a jury’ (*Ibid.*, 29 May 2017: 55).

Second, the Defence highlighted a number of problematic issues linked to the forensic evidence presented in court. In particular, it recalled that, regarding the shelling of a market in Abidjan on 17 March 2011, the forensic pathologist had noted in his report that ‘[n]o shrapnel was found in any of [the victims’ remains]’ even if ‘[g]iven that these were said to have been victims of a shelling attack, it was anticipated that most or all might have blast injuries from an explosive device and that residual shrapnel might be found in their remains.’ (*Ibid.*, 11 September 2017: 67-68). The Defence also questioned the probative value of a T-shirt, allegedly belonging to a victim, which ‘allegedly had a bullet hole’ and which ‘was the topic for multidisciplinary investigation, so that more people had to look at the T-shirt, not only from the DNA, but also other forensic disciplines’ (*Ibid.*, 29 May 2017: 40). Upon questioning by the Defence, the forensic expert explained that the T-shirt had been tested for the presence of blood and that ‘the test was negative’ (*Ibid.*: 48). He also explained that there ‘was not enough DNA from those areas to analyse the DNA. So we can’t draw any conclusion on who wear the T-shirt’ (*Ibid.*: 50). If the Defence used the inherent limits of forensic science to raise doubt as to the cause of death, it also questioned the date of death. During cross-examination, one of the forensic pathologists explained that ‘[d]uring the autopsies, we were not requested to determine the date of death of those bodies’; an explanation which

prompted the Defence to assert that ‘concerning the bodies that you examined or on which you carried out autopsies, it is quite possible that the dates of death could have been before the post-election period’ (*Ibid.*, 19 January 2018: 17). In its closing statement, the Defence was in fact extremely virulent towards the investigation conducted, stating that:

‘the Prosecutor simply did not investigate from the very beginning in an autonomous and professional manner, and that is the real reason for the problems relating to the production of evidence. [...] The Prosecutor did not try to identify victims or their bodies within the necessary time limits, and they did not accomplish the forensic activities necessary on time. And since the Prosecutor did not act in time, they did not present authenticifiable, verifiable and reliable or direct evidence which could be crosschecked’ (*Ibid.*, 12 November 2018: 32-33).

The Defence also highlighted the incoherence in one of the forensic pathologists’ testimony, who testified that ‘she was able to conduct 147 external examinations in a day’. In a reasoning that here showed a good understanding of forensic work, the Defence explained that ‘this would mean that she would have conducted six external examinations per hour in an uninterrupted period of 24 hours’, which ‘would mean that she examined one body every 5 minutes without any interruption’ and which is ‘materially impossible’. This prompted the Defence to conclude that ‘it is impossible to give any value to the reports on these external examinations which were submitted by the Prosecutor and on which he relied. [He] did not conduct an independent investigation. He relied on evidence of poor quality, unreliable, not cross-checked, non-verifiable and indirect’ (*Ibid.*: 62-68).

On 15 January 2019, the Trial Chamber, ‘having thoroughly analysed the evidence and taken into consideration all legal and factual arguments submitted both orally and in writing by the parties and participants finds, by majority, that there is no need for the Defence to submit further evidence as *the Prosecutor has not satisfied the burden of proof* in relation to several core constitutive elements of the crimes as charged’ (*Ibid.*, 15 January 2019: 3, emphasis added). Affirming that this acquittal is the result of the use of forensic evidence by the Prosecutor would be a non-sense. Yet, as shown above, the Prosecution should be more aware of certain limits of forensic science which cannot always give definitive answers as to the date, cause and manner of death. The process of selecting the forensic evidence to be presented in court might thus need to be revised: in this case, it was at times too abstract and too remote from the accused. Ultimately, the majority of the Trial Chamber found that ‘the Prosecutor [...] [h]as failed to demonstrate that public speeches by Mr Gbagbo or Mr Blé Goudé constituted ordering, soliciting or inducing the alleged crimes or that either of the accused otherwise knowingly or intentionally contributed to the commission of such crimes’ (*Ibid.*).

3. The *Ntaganda* judgment: a sampling strategy that finally paid off

The verdict in the *Ntaganda* case was delivered by Trial Chamber VI of the ICC on 8 July 2019 and, for the first time, the accused was found guilty of all the charges of crimes against humanity and war crimes against him. To prove murder as a crime against humanity and as a war crime, the Prosecution relied fairly extensively on forensic evidence, and notably on exhumations conducted in Sayo and in Kobu, both in the Democratic Republic of the Congo. In so doing, the Prosecution opted for a sampling strategy: although mentioning ‘dozens more bodies in civilian clothes [...] found with gunshot wounds and missing limbs’, it relied at trial on the reports of the autopsies performed on five bodies exhumed in Sayo (*Ntaganda* trial transcripts, 2 September 2015: 44-45). For Kobu, the Prosecution focused on the ‘brutal

massacre of some 49 people in a banana field’ (*Ibid.*: 50) and relied on the exhumation of four graves ‘that held in total 12 bodies’ (*Ibid.*: 53) and on the ‘autopsies of 13 human remains’ (*Ibid.*, 8 September 2016: 27).⁷ This sampling strategy proved successful and this evidence was used, albeit as corroboration, by the judges to reach their guilty verdict. With respect to the above-mentioned banana field massacre, the judgment expressly specified that ‘expert witnesses on forensic and exhumation evidence provided additional corroboration’ (*Ntaganda* trial judgment, 2019: para. 276).

The fact that the judges understood the forensic evidence presented before them as corroborating was key. Still related to crimes perpetrated in Kobu, the Prosecution had explained that ‘the analysis of the cause of death was limited to trauma visible on the bones themselves’ and conceded that for some of the bodies ‘the experts could not conclusively determine the cause of death because there was no obvious sign of trauma on the bones’ (*Ntaganda* trial transcripts, 2 September 2015: 53, 56). Similarly to the defence reasoning in *Gbagbo and Blé Goudé*, the Defence used the inherent limits of forensic evidence to question the reliability of the Prosecution’s case: in its closing statements, it asserted that some of the evidence was ‘tainted by a host of anomalies; including, the forensic evidence that showed that there was no sharp-force trauma on any of the bodies that were exhumed at the site’ (*Ibid.*, 30 August 2018: 22). In their judgment, the judges decided on this issue in a manner that reveals a strong understanding of the probative value – and the limits – of forensic evidence:

‘the Chamber takes into account corroborating evidence from those witnesses testified that they saw bodies with slit throats knife cuts, and who looked like they had been killed by machete, as well as decapitated bodies [...]. In relation to the Defence argument that evidence of people being killed by bladed weapons is irreconcilable with the forensic evidence, where zero bodies exhumed at Kobu had sharp force trauma [...], the Chamber does not consider, the expert evidence [...] to be incompatible with the witness testimony in this regard, noting Dr Martrille’s evidence that cutting trauma can leave no trace on the bones, including that if a throat is slit, it may not be visible on the skeleton [...], and Dr Uhlin-Hansen’s evidence that sharp injuries by, for instance, a knife or a machete may cut large blood vessels without hitting the bones [...]’ (*Ntaganda* trial judgment, 2019: note 1971).

Crucially, the Chamber demonstrated that it adequately understood the sampling strategy as a means to prove mass crimes, not as an indicator of sporadic acts of violence which would fall short of being widespread. This is particularly striking in the following extract of the judgment:

‘Having regard to the evidence in this footnote that bodies were removed and buried elsewhere, together with the evidence from P-0420 about the possibility of additional graves in Kobu [...], the Chamber considers that *the overall number of persons killed in Kobu would be greater than the number of bodies exhumed* in Kobu and Tchudja’ (*Ibid.*: note 2020, emphasis added).

This prosecutorial success should not erase the fact that progress in the courtroom might still be needed. In the course of the *Ntaganda* trial, there seems to have been a certain misunderstanding from the Parties as to how to approach and present forensic evidence. The Prosecution cautiously took the time to present the different experts’ qualifications, to the point that even Presiding Judge Fremr didn’t deem it necessary since the Defence was not

⁷ The judgment explains that ‘[a] total of 16 bodies were exhumed in 2014: 14 bodies were exhumed in six graves in Kobu in the site designated as KOB1, and two bodies in a single grave in Tchudja’. See *Ntaganda* trial judgment, 2019: note 1978.

challenging these qualifications (e.g. *Ntaganda* trial transcripts, 15 September 2016: 66-67). The Court heard several forensic experts, whose testimonies were perhaps more informative and educational than probative. This included an expert in legal medicine who, upon the request of the Prosecution, spent quite some time making corrections to his report – notably specifying at length that the report erroneously referred to the left side of the body rather than the right side; a specification which is undoubtedly crucial in scientific terms but which probably is of limited interest to the Court where what matters is the date, cause and manner of death of the victims (*Ibid.*: 72-3, 85). It also included an expert in archeology and anthropology who explained the differences between forensic sciences as well as his methodology, and presented several reports ‘based on a preliminary investigation’, specifying however that ‘[o]ur purpose at that stage was not to collect evidence. Merely to confirm the presence’ of human remains (*Ibid.*, 5 September 2016: 13-20). The Court also heard an expert on DNA identification, who gave a lot of information on DNA, lineage markers, biological traces, DNA extraction, even DNA markers in the Dutch population to ultimately testify that two familial DNA matches were identified, out of ten DNA profiles of human remains (*Ibid.*, 6 September 2016: 59-79). It is thus arguable that, similar to what happened in *Gbagbo and Blé Goudé*, interesting and focused questions came more from the Bench than from the Parties. At the end of the testimony of a forensic pathologist who had carried out a number of autopsies, Presiding Judge Fremr asked whether bullets were found in any of the graves; a question which led to important specifications from the expert witness as to why bullets, even if used, may not be found on the crime scene, ‘depending on the weapon and the type of ammunition’ (*Ibid.*, 9 September 2016: 68-69). If it hadn’t been for the intervention of Presiding Judge Fremr these explanations, which seem crucial in the context of a criminal investigation and trial, would simply have not been given to the Court.

4. Conclusion

As noted by Jürgen Schurr and Carla Ferstman in 2010, ‘[c]ollecting evidence abroad in post- or actual conflict situations and transporting such evidence to a court situated thousands of miles away, thereby bridging the gap between the realities on the ground where the crimes were committed to the courts sitting abroad, without diminishing the credibility of such evidence, remains challenging’ (Schurr and Ferstman, 2010). Now in 2019, an overview of the cases heard by the ICC shows that these challenges are still very real. Yet, this overview also shows a certain evolution with respect to evidentiary practice, at least when it comes to the use of forensic evidence. The very recent *Ntaganda* judgment indicates a better understanding of such evidence on the part of legal practitioners.

So far, at the ICC, forensic evidence has been used essentially to prove murder as a crime against humanity and as a war crime. This is however not to say that scientific evidence is to be confined to certain charges: already in the *Lubanga Dyilo* trial, medical evidence was used to establish the criminal recruitment of child soldiers; more recently, in the ongoing *Ongwen* case, DNA evidence was used to establish ‘the kinship between Dominic Ongwen and the children that these women have said that he fathered’ and contribute to prove the crime against humanity of forced pregnancy (*Ongwen* trial transcripts, 7 December 2016: 27).

Scientific evidence – including forensic evidence – to prove atrocities might thus still be at the embryonic stage and it is to be hoped that the ICC will build on the considerable scientific

acquis stemming from the ICTY experience.⁸ If the beginnings were admittedly timid, asserting that the ICC has failed to follow up on the ‘forensic success’ of the ICTY might be too hasty. As noted in the introduction, the two institutions operate in radically different contexts: the ICTY’s jurisdiction was limited to one geographical area – that of the Former Yugoslavia – while the ICC’s jurisdiction aims at being global. If this globalization is to be applauded, it might also be that it represents an obstacle to the conduct of exhaustive investigations, and even more so in areas of ongoing violence. The sampling strategy adopted by the Prosecution might thus be the only way forward: for the judicial purpose of trying the accused, this might suffice as long as the forensic investigation, even if partial, is conducted thoroughly and allows for the collection of robust corroborating forensic evidence.

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⁸ The ICTY exercised jurisdiction in 66 cases (161 defendants); related to the Former Yugoslavia the International Residual Mechanism for International Criminal Tribunals exercises jurisdiction in 4 cases (5 defendants). Out of these 70 cases, 43 dealt with forensic evidence. In contrast, forensic evidence was only resorted to in 3 cases (out of 57) at the International Criminal Tribunal for Rwanda and anecdotally referred to at the Special Court for Sierra Leone and the Extraordinary Chambers in the Courts of Cambodia.

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Forensic evidence in atrocity trials: A risky sampling strategy?

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Highlight statements

- Forensic investigations of international crimes should be as complete as possible.
- Forensic evidence should be used as corroborating evidence in atrocity trials.
- Forensic evidence should be directly relevant to the case and the accused.
- The Prosecutor's sampling strategy has proven successful in the *Ntaganda* case.

Forensic evidence in atrocity trials: A risky sampling strategy?

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Conflict of Interest and Authorship Conformation Form

I hereby confirm that, as sole author of the paper, I have completed the conception, design, analysis and interpretation of the data and written the article in full.

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I also confirm that I have no affiliation with any organization with a direct or indirect financial interest in the subject matter discussed in the manuscript.