Sexual Violence beyond Reasonable Doubt: Using Pattern Evidence and Analysis for International Cases

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Establishing the pattern of crime is fundamental for the successful investigation of international crimes (genocide, war crimes, and crimes against humanity). A pattern of crime is the aggregate of multiple incidents that share common features related to the victims, the perpetrators, and the modus operandi. Pattern evidence and analysis have been used successfully, mainly in the investigation of large-scale killings, destruction, and displacement; the use for sexual violence charges has been remarkably more limited. There is a need to overcome this gap by setting proper methods of data collection and analysis. At the level of evidence collection, under-reporting should be addressed through victimization surveys or secondary analysis of data available from different sources. At the level of analysis, the available evidence needs to be subject to impartial examination beyond the pre-conceptions of the conflict parties and advocacy groups, in compliance with scientific standards for quantitative, qualitative, and GIS (Geographic Information Systems) methods. Reviewing the different investigative experiences and jurisprudence will help to set the right methodology and contribute most efficiently to putting an end to the impunity regarding sexual crimes.

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INTRODUCTION

The organizers of the colloquium on “Sexual Violence as International Crime: Interdisciplinary Approaches to Evidence,” held in The Hague on June 16–18, 2009, invited us to propose methods to facilitate more effective investigations of sexual violence in the context of international crimes (genocide, war crimes, and crimes against humanity). This article intends to explore the use of pattern evidence and analysis for this purpose, particularly for what concerns investigations of senior leaders, whether under national or international jurisdictions.

International crimes often comprise a large number of incidents that can be characterized as a pattern as long as they show common features on all or most of the following aspects: (1) the profile of the perpetrators; (2) the profile of the victims; (3) the geographical and chronological distribution of the crime; and (4) the modus operandi in the commission of the crime. The aggregation of multiple incidents into a pattern requires a conceptual turn similar in a way to the criminal law concept of delito continuado (infraction continue, Fortsetzungstaf), whereby a series of criminal incidents with an identity of key features are considered jointly as a single crime. The concept of “Evidence of Consistent Pattern of Conduct” was considered in Rule 93 of the Rules of Procedure and Evidence of the International Criminal Tribunal for the former Yugoslavia (ICTY) and the International Criminal Tribunal for Rwanda (ICTR). The Elements of Crimes of the International Criminal Court (ICC) further refers to the “context of a manifest pattern of similar conduct” in the definition of genocide.1

The investigation of international crimes often requires means of evidence and analysis able to show the series of incidents as a whole and to determine whether they have enough in common to be considered a relevant pattern of crime. Such pattern evidence and analysis, from expert testimony to statistics and crime mapping, have been used successfully mainly for killings and mass destruction and displacement, but their use for sexual violence charges has been remarkably more limited. As Susana SáCouto and Katherine Cleary (2009) have observed, “Unfortunately, while the ad hoc tribunals have used circumstantial or pattern evidence to establish that an accused ordered certain crimes, a review of sexual violence and gender-based cases before these tribunals indicates that they appear more reluctant to do so in these types of cases” (353). The following pages propose some direction to overcome this gap at different steps of the process, from setting the correct methodology principles in the interpretation of the allegations of sexual violence to adequate standards for data collection to the most efficient methods of analysis. Hopefully a commitment to the highest standards of

1. Elements of the Crime of Genocide, http://www.preventgenocide.org/genocide/elements.htm (accessed August 19, 2010).
scientific and legal practice will help to present the evidence of large-scale sexual violence in ways that are the most truthful and cost efficient.

I. METHODOLOGY PRINCIPLES

The investigation of sexual violence patterns, like any other crime, must be guided by logical reasoning resting on three basic principles: impartiality, legality, and gradual standards of evidence.

Impartiality

The growing demand for justice for sexual violence is very much an achievement of the feminist movement, whose main critique concerning rape since the 1970s has been that the crime had been denied or underestimated under a male-dominated system (see, among others, the pioneering work of Susan Brownmiller 1975). This assessment was essentially correct, and the feminist advocacy efforts in the last four decades have been crucial in addressing it, from the media to national jurisdictions and international tribunals (for an overview of international jurisprudence, see Askin 1997, 2005; Aranburu 2003; de Brouwer 2005; Luping 2009).

The feminist critique is still valid and needed today. Consider the following examples. The record of the ICTR has been assessed as “shameful” because “crimes of sexual violence have never been fully and consistently incorporated into the investigations and strategy of the Prosecutor’s Office” (Nowrojee 2007, 370). Concerning both the ICTR and ICTY, according to expert assessment, there has been a “tendency to require that the prosecution meet a higher evidentiary standard in cases of sexual violence and gender based crimes” (SáCouto and Cleary 2009, 356). As an experienced practitioner, I have seen professionals refuse to deal with allegations of sexual violence, neglect the relevant evidence, or set higher standards for evidence on a number of occasions. When I was drafting an indictment for an

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2. I am grateful to Patricia Viseur-Sellers for sharing her expertise and for first bringing to my attention the research of Brownmiller in 1997 in the context of our work at the ICTY. For an overview of the progress that has been made, see Viseur-Sellers (2009). For related empirical research, see Rafter and Heidensohn (1995).

3. See, as well, the periodical reports of the Women’s Initiative for Gender Justice at http://www.iccwomen.org (accessed August 20, 2010). Note the strong condemnation and measures on sexual violence against women and children (no mention of male adult victims) in UN Security Council Resolutions 1325 (2000), 1820 (2008), and 1888 and 1889 (2009).

4. In 2004 Nowrojee produced the report Sexual Violence Crimes during the Rwandan Genocide for the ICTR Office of the Prosecutor (OTP) and gave expert testimony in several ICTR cases, basing her assessment on her direct access to the evidence and a comprehensive review of the ICTR jurisprudence (see Nowrojee 1996, 2004, 2005).
international tribunal in the late 1990s, my modest attempt to include a reference to sexual violence under the chapeau of “persecutions” (as a crime against humanity) was stopped by two attorneys senior to me because in their view there was “no sufficient evidence.” Later I discussed the issue with one of them and was puzzled when he explained that in his country, as a prosecutor, he always avoided dealing with cases of sexual violence because it was “very annoying and difficult to prove.” More recently, while I was lecturing a group of experienced judges and prosecutors visiting The Hague, references to sexual violence were met with laughter and mocking, and I was asked whether international tribunals accepted female investigators, since apparently this was not an option in their country. In 2008 the inquiry on the postelectoral violence in Kenya found an “apparent lack of interest of the police in sexual violence” and many allegations of rape were overlooked by the national police (Commission of Inquiry on the Post-Election Violence 2008, 249). Even today the most common software for crime analysis utilized by police forces around the world, the British-made i2 Analyst’s Notebook, does not include rape in the menu of crimes to be analyzed.5

The reluctance to investigate sexual violence appears to result from two main factors: lack of awareness and sensitivity among teams usually led by senior male officers and a certain taboo or embarrassment when dealing with intimate aspects of our bodies and minds. Researchers from the field of cognitive psychology and the psychology of law could probably assist in analyzing such prejudices and suggest corrective measures (the most obvious being evaluation at the recruitment stage, training, clear policies and standards, appointment of designated specialized staff, and gender balance in teams).

Notwithstanding all this, allegations of sexual violence, just like any other crime, must be subject to impartial consideration when it comes to judicial investigations. Impartiality is a principle of both scientific and legal methodology. Scientific research must deal with hypotheses that are formulated in an impartial way and, further, subjected to neutral testing against the evidence for confirmation, rejection, or reformulation until a valid finding can be established. Impartiality is also a legal duty of the prosecutor of the ICC, who must “in order to establish the truth . . . investigate incriminating and exonerating circumstances equally” (art. 54 ICC Statute).6

Here the logic of the investigation may differ from the logic of advocacy of social movements and others that may accompany the allegations. Those focused on affecting the public opinion, such as the media and

5. For commercial information, see Analyst’s Notebook 8, http://www.i2group.com/template1.asp?id=5 (accessed January 2, 2010). The menu for “crime” shows fifteen different categories, from “broken window” to “assassination,” but no rape.

6. All statutes in this article can be found on the International Criminal Court (ICC) Web site, http://www.icc-cpi.int/ (accessed August 19, 2010).
nongovernmental organization (NGOs), need to communicate clearly the gravity of the crime and the urgency to act. Those focused on establishing the truth in accordance with due process need a more impartial and rigorous handling of the facts. There are at least four notions in the advocacy literature that criminal investigations need to consider critically: sexual violence is not prevalent in every conflict, it is not necessarily a strategic choice as a “weapon of war,” underreporting is not an axiomatic universal fact, and women are not the only victims.

First, the alleged prevalence of sexual violence in all armed conflict. What empirical research shows is that there are very large variations across conflicts and actors, so that in many conflicts, sexual violence is very prevalent, and in others much less so. For example, Susan Brownmiller (1975, 90–91) observed a remarkable absence of sexual violence on the part of the Vietcong forces during the Vietnam War, which in her view was due mainly to strict prohibition enforced by the senior command, as well as the presence of women in the fighting force. The comparative research of Elisabeth Wood (2008) shows that “while sexual violence occurs in all wars, its extent varies dramatically” (321), so that the conflicts of Bosnia, Rwanda, Sierra Leone, and Darfur and the Soviet occupation of Germany are examples of high prevalence of sexual violence, while the conflicts in Palestine, El Salvador, and Sri Lanka feature in a much lower range. While research associated with advocacy projects typically focuses on cases of high prevalence, Wood has taken an interest in researching the cases of low sexual violence in order to identify the inhibiting factors and to show how such crimes are far from unavoidable in wartime. For example, in her analysis of the Tamil guerrilla of Sri Lanka, it appears that minimal sexual violence is the result of a certain puritanical ethos, the strategic need to co-opt the civilian population, and the fact that “the organization prohibits sexual violence and effectively enforces that decision through a tightly controlled military hierarchy in which punishment is swift and severe” (Wood 2009, 152).

It is difficult to identify at a general level the factors that affect the level of sexual violence because of the diversity of armed conflicts and the different kinds of sexual violence. The contributing factors that seem most relevant are opportunity for the perpetrator, related to the availability of vulnerable populations in a given territory and timeline; the strategic agenda of the armed groups to punish, or conversely to co-opt, the civilian population; the sexual and ethical culture of the fighting force; prohibition and its enforcement by senior command levels; and the presence of women in the fighting force.

7. For an overview of research on multiple situations, see Alliance for Direct Action against Rape in Conflicts and Crises (2006).
Second, the assumption that rape is a "weapon of war" or some strategic design. This is a popular line that is probably useful for stressing the importance and gravity of the crime, but the sad reality is that widespread rape may well occur without much higher design. As Susan Brownmiller had observed already in 1975, "after the fact, the rape may be viewed as part of a recognizable pattern of national terror and subjugation. I say 'after the fact' because the impulse to rape does not need a sophisticated political motivation beyond a general disregard for the bodily integrity of women" (37). Brownmiller’s insight remains valid and particularly important for criminal investigations today. On the one hand, assuming that rape must follow from some higher strategy obscures the graver and truer fact that in a context of disrespect for women (and often also men), rape may be easily committed by anybody at any time. Furthermore, the assumption of higher direction may mislead the investigations in an effort to find orders or directions that possibly were never issued, and it may lead to the case being overstated in ways that will be difficult to substantiate in court.

Sexual aggression, like any other form of aggression, may cause long-term damage for the victim and his or her community, which needs to be taken into account in assessing the gravity of the conduct, but this does not necessarily mean that such a consequence was the motive of the aggressor. As the old military motto “Beauty and booty” suggests, rape in wartime is often committed as a kind of sexual looting, the main motive of the aggressor being his immediate sexual satisfaction. In the words of Brownmiller (1975), “beyond the shiny patina of ideological excuse, it was also rape amid the levity and frivolity of men having a good time” (139). Such is the banality of rape, which does not mean that such rape is any less grave, just as “the banality of evil” did not prevent Hannah Arendt from requesting capital punishment for Eichmann.

There are clearly different scenarios of sexual violence in wartime, from the more “opportunistic” kind to the more “strategic” and other variants (see “Typologies" in Part 3). Commentators and practitioners with a focus on sexual violence tend to ignore the obvious fact that the rapist usually gets an orgasm from his crime, and they often do not like to hear about “opportunism” because they fear this may underestimate the gravity of the crimes. The answer to such concerns should be twofold. First, truth should prevail over rhetorical convenience, and if there is truth in the opportunistic bottom-up dimension of the crime, this should not be concealed. Second, opportunistic sexual violence may still imply serious responsibility on the part of higher levels of authority, only under different scenarios of liability, such as (1) deliberate inducement, if the leaders deliberately create the opportunity for rape by giving carte blanche to do so or by setting an example by their own conduct or by notorious and persistent tolerance after the fact; (2) implicit causation if the crime was a natural and foreseeable result of actions triggered by the leaders; (3) command responsibility if the leaders knowingly failed
to prevent or suppress crimes committed by their subordinates (as per art. 28 of the ICC Statute).  

The discussions of “opportunistic versus strategic” in the investigations of sexual violence echo the broader theoretical debate on the etiology of rape. Authors closer to feminist advocacy have emphasized the aspects of social construction and cultural inducement. Authors from the field of evolutionary biology have argued for a deeper biological predisposition among men toward violent sex, which would explain the cross-cultural prevalence of rape. These and other theories should not be seen as mutually exclusive, since each of them may offer valuable insight into the different dimensions of the crime. The investigator will be best served by learning about the different theories and keeping an open mind to different types and causal hypotheses of the crime.

Third, the alleged underreporting of sexual violence. This is true, but it is not the whole truth. It is clear that sexual violence most often goes under-reported for many different reasons that include fear of retaliation; distrust and dysfunction of the criminal justice system; a sense of shame; and fear of rejection by partners, society, and the “marriage market.” Studies of different situations have shown reporting rates between 5 and 18 percent of the total of rapes or sexual assaults committed: 18 percent were reported by the victims of sexual violence from the Rift Valley of Kenya during the post-election violence of 2007–2008; some 15 percent by the female victims of rape in the United States; and 5 percent by male victims of prison homosexual rape.

At the same time, instances of overreporting and false reporting are also known from historical and forensic evidence. As Susan Brownmiller (1975) observed, rape has been widely reported and highlighted for reasons of political expediency or “atrocity propaganda” in a number of cases, including the prominent reports by the Belgian media of the rape of white nuns in the Democratic Republic of Congo at the time of independence (132–33); propagandistic reports of the rape of white women by Native Americans in the nineteenth century wars in the United States (140–53); the portrayal of

8. On the investigation of senior leaders, see Aranburu (2009).
9. For an overview of feminist theories and a bibliography on rape relying mainly on US authors, see Whisnant (2009). For different feminist interpretations of wartime rape, see Rejali (1996). For a focus on gender and genocide, see the Gendercide Watch Project, http://www.gendercide.org. For a well-informed network of legal researchers and practitioners, see the IntLawGrrls blog, http://intlawgrrls.blogspot.com. All links accessed January 2, 2010.
10. For this sort of Darwinian-Hobbesian approach from evolutionary biology, see Thornhill and Palmer (2000). For a thorough critique of this approach, see Travis (2003).
11. For an overview of the different theories, see Gottschall (2004).
12. Commission of Inquiry on the Post-Election Violence (2008, 246).
13. Kilpatrick and McCauley (2009).
14. See Brownmiller (1975, 265), for an estimate on the Philadelphia prison system in 1968.
German forces as rapists by war propaganda during the First World War (41–44); the false rumors of rape committed by the Vietcong spread by US military intelligence in Vietnam (86–87); false allegations of the rape of white women used by the Klu Klux Klan and others as a pretext for lynching innocent black males in the United States (222–24); and the promotion of victims of rape as national heroes in Bangladesh after independence in 1973 (78).

False allegations of sexual violence are a reality, just as with any other crime, because of personal or political motivation. Their extent is difficult to assess, but in all known situations of mass violence they appear to be at a lesser or anecdotal scale vis-à-vis the very large number of truthful allegations. The collector of statistical data should be careful to avoid prompting false allegations from sources who, in certain contexts, may want to please the interviewer or may anticipate some advantage from the claim. As the World Health Organization recommended in 2007, “Information gatherers need to make sure they are not overly influencing participants with their authority, attitude, or demeanour... Experience shows that respondents may misunderstand the purposes of interviews and/or misunderstand whether interviews will lead directly to an increase in or personal access to services” (22).

Fourth, on the reductionist focus on female victims. The one point where the analysis of Brownmiller and some subsequent feminist advocates needs to be corrected is that the problem identified by them is not limited to the “disregard for the bodily integrity of women,” since the bodily integrity of men is also affected in the many cases of male victims of sexual violence (for an overview, see Sivakumaran 2007). For example, the field research of Lynn Lawry and her team found a rather extensive pattern of sexual abuse of male soldiers in Liberia by their commanders, fellow fighters, and enemies (Aldous 2008). More recently the Commission of Inquiry on the Post-Election Violence in Kenya found in 2008 a number of sexual crimes against men yet was unable to interview any victims: “The tragic novelty of this experience meant that there were even fewer support groups available to men than to women. That, added to the humiliation of the violations, meant that no male victims came forward to testify to the Commission, something the Commission understood, but nevertheless found regrettable” (243). The problem of underreporting seems to be particularly acute among male victims since, according to the United Nations Office for the Coordination of Humanitarian Affairs (2008), “there is an extremely limited awareness of, and knowledge about, sexual violence against men and boys in conflict among the humanitarian and sexual violence research community” (2). In spite of all the available information, male victims are entirely ignored in the key resolutions adopted by the UN Security Council in relation to sexual violence in armed conflicts (Resolutions 1325, 1820, 1888, and 1889, adopted between 2000 and 2009).
Legality

The legal definition of the crimes must guide the criminal investigations and often condition their efficiency: crimes that have a clear definition tend to be easier to investigate and successfully proven in court than those with complicated definitions. Killing is usually considered a crime with a straightforward definition, and statistical methods have been used most often for data on killings and mortality. On the other hand, for example, the war crime of “disproportionate attack” has a particularly convoluted definition requiring some comparative assessment of two vaguely defined and antithetical concepts (anticipated military advantage versus resulting damage on civilians) based on the purported perception of the suspect.

The legal definition of rape under international law, as given by both statutory and case law, is particularly robust in that it does not require the victim to be a civilian (given the contextual elements, rape is always forbidden under one crime or another in international law, whether the victim is a civilian or not); it does not admit justifications of “military necessity,” mistake of fact, or mistake of law; and defenses of consent are unlikely to carry any weight in a context of mass coercion and violence. This legal clarity on rape should be conducive to the collection of robust data and evidence. Other kinds of sexual crimes defined more recently and less informed by jurisprudence may present greater difficulties in establishing their objective and subjective elements.

Still, some contextual elements of the crime, such as the link to an armed conflict for a war crime, or the existence of a higher policy of attacking the civilian population for crimes against humanity, may raise particular difficulties. Establishing such elements may be problematic for sexual crimes, as much as for any other crime, if they are frequently committed outside and beyond the context of armed conflict or attack against the civilian population. For example, this might be an issue in a country like Colombia, where serious offenses have often ambivalent links to both armed conflict and common criminality.

Evidence Standards

The process of investigation and prosecution needs to adjust to standards of evidence that gradually arise, from starting with a mere suspicion to some
reasonable belief that will justify a decision to indict by a judge or prosecutor to the certainty “beyond reasonable doubt” that the judges will require a finding of individual guilt. For an initial “reasonable basis” standard, some general reports might be enough to establish the pattern as an objective element (actus reus) of the crime, as long as they are credible and relevant to the scope of the case. For a higher standard at the trial stage the following aspects need to be taken into account.

**Disclosure**

The data gathered for the investigation may be subject to disclosure at the trial stage as a requirement of law or a specific request by the defense or the judges. Such disclosure obligations are regarded as a guarantee for the defendant and his or her right to assess the quality of the sources of evidence relevant to the case. At the stage of collecting data, the following options can be considered: (1) collecting anonymous data valid only for statistical purposes so that the identity of the source will not be subject to disclosure, and (2) obtaining informed consent from the provider for the eventual disclosure of her or his personal data.\(^\text{17}\)

**Credentials**

In the case of expert testimony, the judges and the defense may well raise questions about the professional credentials and neutrality of the witness. This is a common litigation practice, and any expert witness must be prepared to present his or her credentials and answer related questions.\(^\text{18}\) The qualifications of the data collectors might also be subject to scrutiny, for example regarding language skills.\(^\text{19}\)

**Scientific Methodology**

Statistical evidence needs to be produced following standard scientific methodology that is accepted by the scientific community, subject to peer review, and properly sourced and justified. Issues of data collection and sampling techniques are likely to be subject to discussion. Judges may not have the

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17. For a detailed protocol on informed consent, see part 3, section 6, “Informed Consent,” in World Health Organization (2007, 22–23).
18. For a comparative analysis of expert evidence across different national systems, see Meintjes-Van der Walt (2001).
19. On the qualifications of data collectors, see part 3, section 7, “Information Gathering Team,” in World Health Organization (2007, 24–25). On the experience and skills of investigators and interpreters collecting statements of victims, see Viseur-Sellers (2005).
scientific expertise required to understand the methodology of statistics or other scientific fields, which may result in insufficient appreciation of statistical evidence and may require an effort at pedagogy on the part of the expert witness. Further, judges may want to establish meta-scientific safeguards by appointing an independent expert or requesting the assessment of different experts acting independently (as has been done in some jurisdictions for DNA identification).

**Defense Expertise**

The accused is likely to bring experts to challenge on his or her behalf the evidence presented by the prosecution, whether in the area of statistics, forensics, or even cultural context. For example, the defense has presented expert testimony concerning crime statistics in several ICTY cases (Galić, Milutinović, and others).

**Cross-Examination**

Experts or investigators giving testimony before the chamber are likely to be subject to adversarial cross-examination by the defense, who may want to cast doubts on each of the issues raised.

**II. DATA COLLECTION**

The following kinds of data should be considered in the investigation of sexual violence patterns.

**Surveys**

Victimization data may be collected through sampling surveys just as in other fields of scientific research (criminology, epidemiology, demography, etc.). Such surveys will need to comply with scientific standards regarding the design of the sampling strategy, data collection, and analysis. Examples include surveys conducted using different methods in Sierra Leone and Liberia and with refugees from Darfur in Chad (Swiss et al. 1998, note 5; Amowitz et al. 2002; Physicians for Human Rights 2002). If scientifically

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20. See also the survey conducted by the Atrocities Documentation Team (ADT) in Darfur in Totten and Markusen (2006). See the Darfur Refugee Questionnaire utilized by the ADT, which includes references to rape, http://conference.cedat.be/sites/default/files/Pfunderheller_ADTe20questionnaire.pdf (accessed January 3, 2010).
sound, data from specifically designed surveys could provide the best pattern
evidence, the downside possibly being budgetary restrictions.

Medical Data

The data on medical treatment of the victims may constitute important
evidence of a pattern, provided that the victims sought medical assistance,
the providers adequately recorded their services, and eventual biases (due to,
for example, uneven access to medical services, or political factors) can be
identified and controlled for (Swiss and Giller 1993). The privacy rights
of the victims should be respected by means of informed consent as a
precondition for data collection or, alternatively, by inviting the holder of the
data (hospitals or other institutions) to produce generic statistics without
disclosure of personal data. For example, the data on sexual violence provided
by different hospitals in Kenya was used in the inquiry on the postelection
violence in 2007–2008 (Centre for Rights Education and Awareness 2008;
Commission of Inquiry on the Post-Election Violence 2008, 247–48).21
Another option could be data from clinical examinations conducted by
experts specifically for the purpose of the investigation on victims who
volunteer their cooperation.

Crime Reports

Crime reports are data collected by law enforcement or human rights
agencies based on the allegations presented by victims. For example, the data
on rape collected by the United Nations in the Central African Republic
contributed greatly to assessing its pattern as related to the armed conflict in
this country in 2002–2003 (Fédération Internationale des Ligues des Droits
de l’Homme 2003).

Public Reports

Reports from news agencies and other open sources, provided adequate
coverage and source reliability, have great potential in view of the rapid
development of electronic media. Examples include the monitoring of crime
reports in Darfur and Iraq as well as options explored by the Ushahidi project

21. For rape as a common crime in Kenya, see Kisuke (2008).
with Web-based user-generated content since 2008 in Kenya, the Democratic Republic of Congo, Gaza, and elsewhere.22

Internal Records

In some cases the perpetrators and their systems generate valuable data about their own crimes. The most notorious example is the records produced by the German SS on the Holocaust, which were subject to analysis by the official SS statistician in order to assess the pattern of the extermination (Challen 1993).23 Similar data could be available in cases of systematic captivity or sexual enslavement.

Perpetrator Data

Data collection should not be exclusively focused on victims, since information on the profile, behavior, and rules of the perpetrators may be equally relevant to the analysis of patterns, as shown by the pioneering research of Elisabeth Wood. Such data may refer to the utterances of perpetrators when committing the crime or to the rules adopted formally or informally by the attacking force.

Proxy Data

Data related to the consequences of sexual violence may be valuable as leads or circumstantial evidence, including outliers in pregnancy, sexually transmitted infections, traumatic symptoms, abortions, and consumption of certain drugs or tests. Such data may be available in different kinds of records and can be subject to secondary analysis (analysis of data originally collected for a different purpose), or it may be collected for the primary purpose of the investigation through ad hoc censuses or surveys. For example, in 1993 a UN team found in the former Yugoslavia, within a limited sample, 119 pregnancies due to rape, and assuming conservatively that 1 percent of instances of intercourse resulted in pregnancy, they estimated 11,900 rapes related to

22. For Darfur, with a focus on mortality but also including data on rape, see Petersen and Tullin (2006). For Iraq, with a focus on violent deaths, see the Iraq Body Count Project at http://www.iraqbodycount.org, and for Ushahidi, see http://www.ushahidi.com (accessed January 3, 2010).

23. Korherr, an actuary by training, was the official statistician of the SS and was asked by Himmler to produce an assessment of the “final solution.” His report was used in the interrogations of Eichmann, and Korherr himself testified subsequently in a number of trials in Germany.
the sampling frame as an indicator of the large scale of the pattern (Swiss and Giller 1993, 613). Mental health indicators have been also explored in order to analyze sexual violence in the aftermath of Hurricane Katrina (Anastario, Larrance, and Lawry 2008, note 9). Like any other form of circumstantial evidence, proxy data should be considered cautiously, and mainly for corroboration purposes.24

In criminal investigations information cannot be taken at face value, and these types of data should be subjected to standard methods of source evaluation by criteria of credibility, reliability, and so on. When one is working with data of limited quality, it is necessary to acknowledge such limitations, operate with ranges and confidence intervals, and present the findings accordingly.

Sampling of data is a common technique in statistics and other methods of investigating crime patterns. At another level, sampling of incidents is a common technique for building a legal case about the crime pattern. Incidents are chosen in a way like “case studies,” as representative of the overall pattern. This approach was used, for example, in the Junta trials in Argentina, by the truth commissions of Guatemala and Peru (“illustrative cases” is what they called their samples), by the Commission of Enquiry of the Human Rights Commission of Indonesia (they refer to “primary cases”), and in a number of leadership cases before the ICTY, ICTR, and ICC. To what extent certain incidents are representative of a larger pattern of crime must be assessed on a case-by-case basis taking into account the features of the pattern.

III. ANALYSIS METHODS

The available evidence should be subjected to analysis using different methods that originate from the national crime investigations, social sciences, human rights reporting, and the practice of the international tribunals.25

Typologies

Some typology is often needed to classify the different kinds of sexual violence and to assist pattern analysis. A legal typology may be provided by the relevant provisions of law, such as the six types defined in articles 7 and 8 of the ICC Statute: “rape, sexual slavery, enforced prostitution, forced

24. For an overview of the kind of data on sexual violence that can be found among displaced populations, see Ward (2002).
25. For definitions of crime pattern analysis in domestic jurisdictions, see http://www.crimereduction.gov.uk/toolkits/ui020501.htm (accessed August 18, 2010); and http://www.macrimeanalysts.com/articles/IdentifyingCrimePatterns.pdf (no longer available).
pregnancy, enforced sterilization, or any other form of sexual violence of comparable gravity.” Genital mutilation is not included in this list, and it may be worth including in an analytical typology, in view of the gravity and spread of the practice.

Factual typologies have been defined, for example, by the final report of the UN Commission of Experts on the former Yugoslavia in 1994, which found the following five types of sexual violence: (1) “sexual assault in conjunction with looting and intimidation of the target ethnic group . . . before any widespread or generalized fighting breaks out in the region,” (2) “sexual assaults in conjunction with fighting in an area, often including the rape of women in public,” (3) sexual assault of both women and men in detention centers, (4) “assaults against women for the purpose of terrorizing and humiliating them often as part of the policy of ‘ethnic cleansing,’” and (5) sexual enslavement of women.26 This typology gives a useful overview, but it is not entirely consistent in the criteria utilized: type 4 is about motive, while the other types refer to the chronology or other issues, which could create some overlapping and confusion in the analysis. Alternative motives, other than the “strategic” kind mentioned in type 4, were disregarded by the Commission of Experts.

The Commission of Inquiry on the Post-Election Violence (2008) in Kenya found, regarding sexual violence, that “different perpetrators acted for different reasons” and identified three main types: (1) as “a means used to pressure people to leave their homes, to retaliate against them for having voted for the wrong candidate, tribe, or party and in tandem with that to dominate, humiliate and degrade them and their communities into a pit of powerlessness”; (2) “in other areas, sexual violence was an opportunistic act played out against a background of lawlessness and a vacuum of power that created disorder bordering on anarchy”; and (3) abusive sex trade imposed on displaced women (Commission of Inquiry on the Post-Election Violence 2008, 252–53). This typology seems more coherent in its consideration of different “reasons” or motives behind the crime, presenting the dichotomy between opportunistic and strategic crimes that is so frequent in scenarios of mass violence.

Factual typologies, while necessarily situation specific, may be assisted by consideration of the following very frequent types:

1. Opportunistic: As discussed above, a type of sexual looting decided by the direct perpetrator, who aims primarily at his own sexual satisfaction while taking the opportunity offered by the defenselessness of the victim and possibly other factors.
2. Strategic: when used as a means to terrorize, expel, or subjugate the victim, and possibly her or his community. This may become apparent with conducts that may not give sexual satisfaction to the perpetrator (e.g.,

26. Chapter 4, “Substantive Findings,” Section F, “Rape and Other Forms of Sexual Assault,” http://www.his.com/~twarrick/commxyu5.htm#IV.F (accessed April 19, 2010).
sterilization, mutilation, or penetration with objects) or when the aggression is publicized with an intent to offend the wider population.

3. Captivity: Scenarios of sexual violence in conditions of captivity combine opportunistic and strategic aspects, since the aggression may be decided by the direct perpetrator for his own satisfaction, while the opportunity to abuse is systemically constructed by those who established the captivity regime. This type of crime may include scenarios of abduction, sexual slavery, abuse within detention facilities, forced “marriage,” or sexual abuse of child soldiers. Crimes committed in a context of captivity, whether sexual or other, are usually easier to investigate in terms of leadership responsibility. The landmark cases of sexual violence of ICTY focused on captivity scenarios (rapes in the Čelebići detention camp, rape and torture by Furundžija, sexual enslavement in Foča, genital mutilation in the Omarska detention camp).

Databases

The available data must be registered in a relational database designed with adequate analytical standards and technical requirements. Databases are virtually indispensable for mastering large series of reports and analyzing their common features, and various models have been developed in the last two decades from police investigations, human rights investigations, and the social sciences. In a basic format anybody can develop a database with a simple spreadsheet as long as the categories are correctly defined, the input is consistent, and the sources are sufficiently reliable and complete. From the field of human rights investigations, very useful database models have been developed and implemented in multiple situations since the 1990s, such as the model *Who Did What to Whom?* of the American Association for the Advancement of Science and the Human Rights Information and Documentation Systems, International (HURIDOCS) model (Dueck, Guzman, and Verstappen 1993; Dueck and Noval 1993; Ball 1996; Ball, Spirer, and Spirer 2000). The more advanced database models should provide for object-relational applications (links to the original electronic files containing the information or scanned images of the original paper records), descriptive statistics, graphics, and Web-based or remote access. The choice of the most suitable database model will depend on the available human and technical resources.

Statistics

To the question of whether statistics can be used as evidence of sexual violence patterns in leadership cases, the answer is yes, since similar methods have been used successfully for other offenses in international tribunals and
The conceptual construction of the leadership cases usually comprises three main building blocks: the “crime base,” understood as the bottom of a pyramid made up of the pattern of multiple incidents; the organizational structures that were the medium utilized to commit the crime in the center; and the individual suspect allegedly “most responsible” for the crime pattern at the apex of the construction. The logical sequence of the analysis should correspond generally to the three main areas of the case, and different kinds of methods tend to be most relevant to the different steps (see Figure 1).

**Description**

The first step requires a description of the pattern, including estimates of the numbers of victims and incidents, their geographic and chronological distribution, and the profile of victims and perpetrators. Here qualitative, quantitative, and geographic information systems (GIS) methods may be utilized, and descriptive statistics can make a unique evidentiary contribution to the most accurate and objective assessment of the crime pattern. This has been the experience of the ICTY prosecutor since 2000 with the use of statistics for the description of crime patterns. The expertise originated mainly in the field of demography, led by Helge Brunborg and Ewa Tabeau,

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27. For epidemiology statistics, see Loue (2000) and the publications of the Centre for Research on the Epidemiology of Disasters at http://www.cred.be (accessed May 26, 2010). See also Aitken and Taroni (2004) and Asher, Banks, and Scheuren (2008).

28. For an advanced discussion on the logic of investigation and litigation, see MarcCrimmon and Tilters (2002).

29. For an overview of ICTY statistical evidence as of 2006, see Mijatovic (2006).
using data from multiple sources (census data, exhumation records, International Committee of the Red Cross data on missing persons, data provided by NGOs, etc.). This evidence was accepted by the judges and contributed to convictions in the cases of Krstić, Blagojević, and Jokic (for the mass killings in Srebrenica in July 1995), Galić (for the siege of Sarajevo and the resulting injuries and deaths of civilians in 1992–1995), and Brdanin (for persecutions in the Bosnian Krajina, including thousands of killings). Most of this work relied on different techniques of counting, matching, and managing existing individual records, which, as long as the records are reliable, makes for a relatively safe and robust approach. For the case of Galić, a more complex method of “multiple system estimate” (MSE) was used to estimate the total victimized population on the basis of the existing census and other kinds of data.

MSE is a method for quantitative estimates based on certain extrapolations from matches between several samples that should have been collected randomly and independently from each other. The samples can be collected specifically for the estimate or they may be found and utilized as a matter of secondary analysis. For the latter, in reality the data collection preconditions are very difficult to meet or correct in the context of war victimization, and the validity of the method is arguable.

Since 2004 the prosecutor of the ICC has used descriptive statistics in all investigations, both internally for purposes of situation and case selection (including assessments of crime gravity and degrees of responsibility among leaders) and to support applications for arrest warrants before the judges (from the application for Kony and others in Uganda to the application for President Bashir of the Republic of the Sudan).

Correlation

Once the pattern of crime as such has been described, there is a need to analyze its correlation with the actions of the relevant structures, such as military offensives, orders, appointments, deployments, peace agreements, etc. It will be difficult to assess the correlations statistically because the available data will rarely be sufficiently complete to run tests of significance in a reliable way. Correlations may be shown in a nonstatistical way just by describing the chronological flow of events, presenting parallel graphic time

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30. Helge Brunborg is a demographer who has been employed by the ICTY OTP since 1997. For the Krstić case he testified and presented the team’s “Report on the Number of Missing and Dead from Srebrenica.” Ewa Tabeau is a demographer heading the Demographic Unit of the ICTY OTP; for the Galić case she testified on the basis of her report, “Population Losses in the ‘Siege’ of Sarajevo, 10 September 1992 to 10 August 1994” (see her recommendations for the ICC OTP in Tabeau (2003)).

31. For a defense of the MSE method, see Silva and Ball (2008).
lines, or using GIS to map the overlap between the crime pattern and certain units or resources.

Causation

As every social science student knows, correlation is not causation, and in criminal investigations, correlations are usually only one of the elements that contribute to the chain of causality. Criminal causation refers to the specific conduct of the individual suspect and usually rests on complex qualitative assessments of the modes of liability and mental elements (including possible knowledge of particular facts, specific intent, material context, personal qualifications, etc.). Such qualitative judgment is usually informed by the testimony of insiders or other witnesses who interacted directly with the suspect, as well as records of public statements, intercepted communications, or internal documents.

Problems arose for the ICTY prosecutor when she moved from a descriptive kind of statistical analysis to a more ambitious analysis of causality, conflating in a way the logical sequence of description—correlation—causation. This attempt took place first in the case against Milošević for crimes committed in Kosovo, eventually to be the case of the highest civilian authority tried by the tribunal. The prosecutor engaged an external expert to present statistical evidence in relation to mass deportations and killings in Kosovo. The expert first presented his report and testimony in 2002 and was subjected to cross-examination by Milošević himself. Beyond descriptive statistics, the expert defined certain causal hypotheses and applied tests of regression to them. An interesting question in cross-examination was why the statistical analysis focused on only one segment of the Kosovo population, the local Albanians, when local Serbs had also experienced mass displacement. The witness answered that such was the scope of the case as defined by the prosecutor, which was true but still raises doubts about the validity of the findings: it is difficult to assess whether there is group-specific targeting if the analysis is limited to a particular group without the benefit of a comparative assessment. The defendant also raised a valid point when asking about the choice of the causal hypotheses, which could be seen as arbitrary or as presenting false dilemmas, since large-scale displacement and violence may result from multiple factors that are not mutually exclusive. We do not know what the judges thought of this statistical evidence because the proceedings unfortunately ended without a judgment due to the death of the accused.

32. The expert, Patrick Ball, is a statistician with experience in the analysis of mass violence in multiple situations worldwide through his work with the American Association for the Advancement of Science, the Human Rights Data Analysis Group, and Benetech (see Ball (2000); Ball et al. (2002)).
When the same expert provided his statistical analysis and testimony in the related case against Milošević and others in 2008, the judges dismissed it because they found both the data and the methods unreliable. The judges agreed partly with the critique presented by the defense’s expert witness and found that the data were inconsistent and the analysis of causality reductionist (ICTY judgment of February 26, 2009; United Nations 2009, 13–17). Subsequently, to their credit, an associate of the expert conducted a thorough review of this experience and found a number of important lessons to be learned in order to improve the use of statistical evidence (Hoover 2009). In any event, the judges did convict the accused, which begs the question of what exactly would have been the added value of the statistical evidence.

Crime Mapping

Crime mapping is the standard term for the use of GIS in crime analysis. It may range from basic drawing by hand to computerized cartography through geo-coding, geo-databases (matching descriptive data with geometric data), and geo-statistics.33 Provided the accuracy of the geographic and other data is sufficient, crime mapping should be used for analyzing patterns of sexual violence just as much as it has been used for other crimes in national and international jurisdictions. In the absence of precise geographic coordinates for the specific incidents (which is often the case), aggregation by broader geographic units (district, province, etc.) may provide a valid approximation. Since 2004 the prosecutor of the ICC has used crime mapping techniques in all investigations, including for presentations before the judges, whether plotting incidents and relevant events on maps, using animation to show the flow of events over the relevant areas, analyzing and coding satellite imagery, or using remote sensing data for three-dimensional topography. For example, in the case of Bemba, data on rape and other crimes were plotted on animated maps to analyze the correlation with military operations, and in the case of Bashir, crime and tribal population data were plotted in order to analyze correlations indicative of specific intent (in both cases these maps were presented before the judges).

Pattern Witnesses

Using witnesses who have an overall view of the crimes is a common practice for identifying patterns of international crimes and presenting them before the trial chambers. Precedents have been known since the Tokyo

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33. For domestic crime mapping standards, see, among others, Harries (1999).
trials, when missionaries who witnessed the “Rape of Nanking” were called as witnesses for the prosecution, since missionaries were able to move through the city when the rapes and other crimes were taking place (Kaiyuan 2001). As referred to above, the testimonies of Binaifer Nowrojee before the ICTR and Beth Vann before the Special Court for Sierra Leone are valuable precedents.

Witnesses of this kind may include field workers, researchers, journalists, international observers, and local leaders and authorities, conditional on their agreement and reliability, and provided there is no impeding conflict with their primary responsibilities. Often the testimony of these witnesses is supported by the reports that they produced at the relevant time (a technique already utilized in the Tokyo trials and greatly exploited before the different international tribunals).

IV. CONCLUSIONS

Pattern evidence and analysis have been used successfully to a limited extent for the investigation of sexual violence in international cases, and they need to be further developed at various levels.

At the organizational level, the tendency of law enforcement and judicial institutions to neglect sexual violence needs to be seriously addressed from the highest levels of management and direction, to recruitment, investigations, litigation, and judges. Awareness of the seriousness of sexual violence should be a precondition to work in the investigation of international crimes, and professionals in this field must be directed toward and know how to look actively for relevant evidence and to interact empathetically with victims and witnesses. The rather clear-cut definition of rape under international law allows for no excuses; rather, to the contrary, it lays the foundations for particularly solid grounds of evidence.

At the evidence collection level, there is a need to address underreporting and bring to light the very large “dark figure” of sexual crimes that remains unknown. Specific victimization surveys may produce the most comprehensive and suitable evidence, for which proper methodology and resource allocation will be needed. Perpetrator-focused evidence is critical: learning about the point of view, motives, and rules of the perpetrator is essential for successful criminal investigations. Secondary analysis of medical and other data may be of great usefulness, provided there is informed consent from the victims or adequate transmission of these records by the health authorities and

34. Some of them were scholars in Chinese culture and had reported to the Japanese Embassy in a series of letters.

35. Beth Vann, Report to the Office of the Prosecutor, the Special Court for Sierra Leone: Conflict-related sexual violence in Sierra Leone, May 14, 2007, as filed by the prosecutor in the case against Charles Taylor (SCSL-03-01-PT) on May 15, 2007.
professionals. Proxy data should also be considered, to the extent possible and reasonable. Specific training is clearly advisable for the originators and collectors of the data.

At the analysis level, the available evidence needs to be subject to impartial examination beyond the preconceptions of the conflict parties and advocacy groups. Some of the arguments that are popular in media and other sources may need to be critically considered to avoid unfair exaggerations that could distort the truth as well as damage the case in court. Analysis will need to resist the temptations of causal and other fallacies and comply with the relevant scientific standards, allowing quantitative, qualitative, and GIS techniques to present the best findings on the description, correlations, and causation of the patterns. For that matter, the analysis work will need to be properly planned and resourced from the outset of the investigation. Thorough review of different experiences and lessons learned in the field of investigations of international sexual crimes is needed at the professional and academic levels. Training of prosecutors and judges would help them better appreciate pattern evidence and analysis.

This is not an impossible task. It is only a matter of bringing together the available experiences and resources, with the clear purpose of putting an end to impunity for sexual crimes.

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