THEORIES OF EVALUATION OF EVIDENCE AND THE INTERNATIONAL CRIMINAL COURT PRACTICE

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How often have I said to you that when you have eliminated the impossible, whatever remains, however improbable, must be the truth?

Sherlock Holmes

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1. INTRODUCTION

i. Problem

One of the most debated and controversial topics amongst legal scholars has been the role of probability in the evaluation of legal proofs conducted in the fact finding process which is typical of courts. This matter is especially important in criminal proceedings, where the standard of proof is set to "beyond any reasonable doubt". In international criminal tribunals, the governing principle is the "free evaluation of evidence" which means that judges are not obliged to respect any kind of rule on how to evaluate evidence and can therefore pick the approach that they consider being the best fit to evaluation[1]. The ad-hoc tribunals and the International Criminal Court so far have not stated a preference for any kind of mathematical or non-mathematical approach to evidence and for this reason an analysis of their case law is inevitably crucial in order to understand which method was applied by the judges in each specific case.

ii. Purpose

This essay will first outline the main differences between mathematical and non-mathematical approaches to evidence. The focal flaws about methods applying mathematical probability theories will be mentioned and it will be argued why this method cannot be applied by the International Criminal Court. Then the non-mathematical approach to evidence will be delineated and specific attention will be given to Cohen's system of inductive probability. Consequently, the reasoning of the International Criminal Court in a selection of cases will be studied in order to determine which approach was picked by the Court. The author will seek to prove the hypothesis that the International Criminal Court applied a reasoning of induction by elimination as delineated in Cohen's theory.

iii. Research questions

Has the International Criminal Court adopted Cohen's Alternative Hypothesis Approach in the *Al-Bashir* and *Ngudjolo* cases? Is this a suitable approach to evidence in the ICC? What are the problems connected to this kind of approach?

[1] Mark Klamberg, *TheAlternative Hypothesis Approach, Robustness and International Criminal Justice - A Plea for a'Combined Approach' to Evaluation of Evidence,* Journal of International Criminal Justice, vol. 13 (2015): 535-553, p. 536.

iv. Limitations

Due to the vast academic work on the matter, the author has decided not to describe comprehensively all the existing theories on how to evaluate evidence but to focus on what she thought were the most relevant theories applicable to three ICC cases.

2. ANALYSIS

i. Mathematical approaches to evidence: the Evidentiary Value Method and the Theme Probability Model

An item of evidence can be defined as

> […] a stipulation, a fact established by judicial notice, or most frequently the portion of the testimony of a witness or a documentary exhibit that is introduced to help prove a factual connection. It comes, with the exception of matters of which judicial notice is taken, from two sources: the prosecution and the defence[2].

The process of fact finding requires an evaluation of all the evidence that has been presented by the parties in order to decide whether the defendant can be considered guilty or not. As stated by Diesen[3], the standard of proof is "a question of law, i.e. it is an abstract norm which (similarly to the existence of certain prerequisites for a given crime) is defined by a legal rule" where instead evaluation of evidence "is a question of fact, i.e. in this context is a decision of how the evidence in a particular case relates to the norm". The two concepts are therefore strictly connected but one relates to the general norm (standard of proof) where, on the other hand, the second refers to the application of the general norm in a particular case. As already mentioned above, the general standard of proof which is applied by both domestic and international criminal courts is "beyond reasonable doubt". As this standard does not present any differences between cases dealt with by a domestic or an international court, it is possible to take into considerations theories which were originally meant for domestic courts and analyze them as opposed to international criminal law practice.

Frequency (or mathematical) approaches to evaluation of evidence assign different percentages to the standard of proof which is less than "full certainty" and therefore presented information (or lack of it) is transformed into a numerical value (usually around a 90-95 percent probability level) which is then compared to the required standard of proof[4]. In disputes concerning legal issues, it is not possible to reach a conclusion with absolute certainty and for this reason the evaluation of evidence is "an estimation and combination of probabilities" which, applied to a legal scenario, "is concerned with the degree of belief in a

[2] D. H. Kaye, *Do We Need a Calculus of Weight to Understand Proof Beyond Reasonable Doubt?*, Boston University Law Review, vol. 66 (1986), 657-671, p. 659.
[3] Christian Diesen, *Beyond Reasonable Doubt - Standard of Proof and Evaluation of Evidence in Criminal Cases*, Scandinavian Studies in Law – Legal Theory, vol. 40 (2000), 169-180, p.169.
[4] Mark Klamberg, *Evidence in International Criminal Trials: Confronting Legal Gaps and the Reconstruction of Disputed Events*, International Criminal Law Series – Vol. 2, Martinus Nijhoff Publishers, 2013, p. 158.

proposition, falling short of certainty[5]". The prosecutor's burden of proof is satisfied when when the probability exceeds this threshold value.

Frequentist "traditional"probability can be defined as

> a system of reasoning that associates an event's chances of occurring with instantial multiplicity. Under this system, an event's chances of occurring are favourable when it falls into the majority of the observed events. Conversely, an event's chances of occurring are not favourable when it falls into the minority of the observed events. An event's probability consequently equals the number of cases in which it occurred divided by the totality of relevant cases[6].

This essay will outline the main features of the Evidentiary Value Method and of the Theme Probability Model. The Evidentiary Value method was originally elaborated by Ekelöf[7]. It relies on the value which the evidence has for the evidentiary theme, its purpose is to establish if there is a casual relationship between the evidence and the evidentiary theme in question. Its major concern is the proof of a specific limited body of evidence and it aims at assessing the probability that the evidence proves the hypothesis[8]. On the other hand, the Theme Probability Model aims at assessing the probability of the hypothesis given the evidence. It aims at determining how probable is that the matter in question, for which the evidence may or may not provide some degree of support, is true[9]. A major difference with the Evidentiary Value Method is that it assumes that there is an initial probability for the theme before hearing of evidence.

Both the Evidentiary Value Method as conceived by Ekelöf and the Theme Probability Model are grounded on the concept of theoretical frequency but neither of them has been able to establish itself in court practice in a pure, theoretical form[10]. As stated by Tribe,

> the fact that mathematical evidence taken alone can rarely, if ever, establish the crucial proposition with sufficient certitude to meet the applicable standard of proof does not imply that such evidence- when properly combined with other, more conventional, evidence in the same case - cannot supply a useful

[5] *Ibid.*
[6] Ronald J. Allen and Alex Stein, *Evidence, Probability and the Burden of Proof,* Arizona Law Review vol.557 (2013), 557-602, p.596.
[7] Ekelöf in Klamberg, 2015.
[8] Klamberg, 2015. *Supra* n. 1, p. 538.
[9] *Ibid.*
[10] Diesen (2000). *Supra* n. 3, p. 173.

link in the process of proof[11].

It is true that frequency models can be valuable in cases such as those where DNA or other types of evidence are accessible and they can be applied to demonstrate "how likely a person randomly selected from a given population would match the sample" or, in cases of mass atrocities with a large number of victims, they can be used to select "statistically relevant samples of victim population as a whole[12]". On the other hand, these models present inherent flaws which cannot be ignored.

Diesen provides a very thorough critique of frequency approaches to evidence[13]. The essential theoretical defect of frequency theories is that they require statistical evidence which is not available to the Court: courts are not capable of evaluating in numerical terms a piece of factual evidence, as they are not aware of the frequency of different casual relationships that they are applying. For example, they are not capable of assessing the probability that a certain witness's observation is in conformance with what has actually happened.

Furthermore, frequency theories are based on the assumption that a high probability figure describing the relationship between existing evidence and a typical case means that the value of that piece of evidence is high. This means that what is measured is the conformance between the actual evidence and that which has really happened. Thus, this measurement relies on the assumption that a representative population and a compliant result exist and this condition is never satisfied in in a criminal case.

Moreover, the strongest argument in Diesen's analysis is the one concerned with the fact that probability calculation is not capable of accounting for individual cases. It focuses on statistics, where instead most of the times criminal cases deal with unique and infrequent situations.

In conclusion, for all the aforementioned reasons, an approach to evidence based on frequency probability cannot be the method through which the International Criminal Court reaches a conclusion. It is self-evident that the cases dealt with by the ICC are of the utmost exceptionality and therefore an attempt to evaluate statistical evidence would be void.

ii. Non-Mathematical Approaches

The main theory which belongs to this category is the so called Cohen's Baconian Theory[14]. Sir Bacon, in the 17th century, elaborated a probability model which rejected "the

[11] Laurence H. Tribe, *Trial by Mathematics: Precision and Ritual in the Legal Process,* Harvard Law Review vol. 86 (1971), 6, 1329-1393, p. 1350.
[12] Klamberg, 2015. *Supra* n. 1, p.540.
[13] Diesen (2000). *Supra* n.3.
[14] L. Jonathan Cohen, *The Probable and The Provable*, Oxford: Clarendon Press, Oxford, 1977.

idea that a hypothes or a proposition may be proved just by accumulating evidential instances favourable to it[15]". Baconian probability is essential when considering the "eliminative and variative testing of hypothesis" since it considers "how many different tests have been performed and how completely our testing has involved all matters that anyone could think of. […] In a Baconian view of probabilistic reasoning the weight of evidence depends in large part on how many questions there are that remain *unanswered* by the evidence we have[16]". What this entails is that according to this theory, weight of evidence is strictly connected to how complete the coverage of evidence is on matters which are relevant in the inference.

Therefore, Cohen's theory applies a system of probabilities which is distinguished from mathematical probability since it is meant as an ordinal or comparative system. Cohen's system relates to inductive probability and works through eliminative induction[17]:

> In a relatively uncomplicated case proof beyond reasonable doubt—i.e. an inductive probability that amounts to virtual certainty—is achieved when every let-out of this nature is eliminated, either by oral, documentary, or other evidence, or by reference to facts that the defence admits or the court is prepared to notice. For then the situation has been shown in effect to satisfy the antecedent of a fully supported (because appropriately qualified) generalization of which the consequent in effect declares the defendant's guilt […] In more complicated cases, however, a great deal of argument may be needed even to establish such facts as the reliability of a certain witness or the ownership of the objects allegedly stolen. […] But, however complicated the structure of the proof in a criminal case, the requisite level of inductive certainty is always achieved in the same way. *Every relevant reason for doubt has to be exclude [emphasis added]*[18]

In practice, evidential tests must be used to eliminate hypothesis and those that best resist these attempts to eliminate them are the ones which should have more confidence[19]. Cohen argues that hypotheses should be graded according to how they survived these relevant evidentiary tests in which the circumstances are varied. In other word, this is similar to the process through which scientists search for "invariances" i.e. "possibilities that seem to

[15] Klamberg (2013). *Supra* n. 4, p. 164
[16] Analysis of evidence, terence anderson david schum william twiningnì p. 258
[17] David A. Schum, *Probability and the Processes of Discovery*, Boston University Law Review vol. 66 (1986), 825-876, p. 854.
[18] Cohen (1977). *Supra* n. 14, p. 249-250
[19] Klamberg (2015). *Supra* n.1, p. 542.

remain true in spite of the best efforts to invalidate them[20]". Finally, Cohen argues that the standard of beyond reasonable doubt demands that "the evidence you have just heard and/or seen leaves no lingering reasons for you to doubt; in short, the prosecution has covered all its bases with regard to means, motive and opportunity[21]".

iv. ICC Case law

a. The Al-Bashir Arrest Warrant case

On March 4th 2009, the Majority of the Pre-Trial Chamber I refused to issue a warrant of arrest against President Omar Al Bashir for three charges of genocide[22]. The Prosecution submitted an appeal on 10 March 2009. The issue subject of the appeal was whether the correct standard of proof in the context of Article 58 of the ICC Statute requires that the only reasonable conclusion to be drawn from evidence is the existence of reasonable grounds to believe that the person has committed a crime within the jurisdiction of the Court. The Prosecution claimed that the Majority had applied a higher standard of proof, namely one equal to that of "beyond reasonable doubt" required at the trial stage for a conviction[23].

On a preliminary note, it is interesting to analyse the dissenting opinion in the decision of the Pre-Trial Chamber carried out by Judge Usacka, who stated

> It is, clear to me, however, that when the Prosecution alleges that the evidence submitted supports an inference of genocidal intent, in order for there to be reasonable grounds to believe that such an allegation is true, the inference must indeed be a reasonable one. Yet, in light of the differing evidentiary burdens at different phases of the proceedings, *the Prosecution need not demonstrate that such an inference is the only reasonable one at the arrest warrant stage* [*emphasis added*] [24].

As was pointed out by the Prosecution in her Appeal, the requirement that there are no other reasonable conclusion is a function of the standard beyond reasonable proof and "it means that *any other reasonable alternatives, i.e. anything that would give rise to a*

[20] Schum (1986). *Supra* n. 17, p. 855.
[21] *Ibid.*
[22] ICC, *The Prosecutor v. Omar Hassan Ahmad Al Bashir*, Warrant of Arrest for Omar Hassan Ahmad Al Bashir, No. ICC-02/05-01/09, 4 March 2009.
[23] ICC, *The Prosecutor v. Omar Hassan Ahmad Al Bashir*, Prosecution Document in Support of Appeal against the "Decision on the Prosecution's Application for a Warrant of Arrest against Omar Hassan Ahmad Al Bashir" No. ICC-02/05-01/09 OA, 6 July 2009.
[24] *Supra* n.22, para. 32-34, 86.

reasonable doubt, have been excluded [*emphasis added*][25]" and this is exactly the result which is sought through the evidentiary test and the elimination of hypotheses typical of Cohen's Alternative Hypotheses Approach[26].

On the 3rd February 2010, the Appeals Chamber reversed the decision of the Pre-Trial Chamber and corrected the standard of proof which it had originally applied[27]. The Appeals Chamber held that "requiring that the existence of genocidal intent must be the only reasonable conclusion amounts to requiring the Prosecutor to disprove any other reasonable conclusions and to eliminate any reasonable doubt[28]" and that therefore the Pre-Trial Chamber applied a standard which was too high than the one required by Article 58 of the ICC Statute. By doing so, the Appeals Chamber recognized the importance of an approach to the evaluation of evidence which has the purpose of eliminating hypotheses.

b. The Ngudjolo case

On 18 December 2012, Mr Ngudjolo was found not guilty of all charges against him and ordered to be immediately released[29]. The charges arose from an attack on 24 February 2003 on the village of Bogoro, Ituri, in the Orientale Province of the Democratic Republic of the Congo ("DRC"), which was part of a broader armed conflict in Ituri. He was acquitted of four charges, namingly war crime of killing, of directing an attack against a civilian population and of destruction of property; crime against humanity of murder. Furthermore he was also acquitted of having committed crimes jointly with Germain Katanga. A prosecution witness, a UN human rights investigator, had testified that Ngudjolo admitted to her that he had organized the Bogoro attack on 24 February 2003. Ngudjolo denied having made that statement and testified that he never met this witness. The Trial Chamber found the witness

[25] Supra n. 23, para 58.
[26] See further *Prosecutor v. Delalic et al*, IT-96-21-A, Appeal Judgment, 20 February 2001, para. 458: "[A] conclusion must be established beyond reasonable doubt. It is not sufficient that it is a reasonable conclusion available from that evidence. It must be the only reasonable conclusion available. If there is another conclusion which is also reasonably open from that evidence, and which is consistent with the innocence of the accused, he must be acquitted". See also *Prosecutor v. Vasiljevic*, IT-98-32-A, Appeal Judgment, 25 February 2004, para. 120: "the standard of proof to be applied is beyond a reasonable doubt, and the burden lies on the Prosecution as the accused enjoys the benefit of the presumption of innocence. […] when the Prosecution relies upon proof of the state of mind of an accused by inference, that inference must be the only reasonable inference available on the evidence"..
[27] ICC, *The Prosecutor v. Omar Hassan Ahmad Al Bashir*, Judgment on the appeal of the Prosecutor against the "Decision on the Prosecution's Application for a Warrant of Arrest against Omar Hassan Ahmad Al Bashir", ICC-02/05-01/09 OA, 3 February 2010.
[28] *Ibid*. para 33.
[29] ICC, *The Prosecutor v. Mathieu Ngudjolo Chui*, Trial Chamber II, "Judgment pursuant to article 74 of the Statute", ICC-01/04-02/12-3-tENG, 18 December 2012.

credible, and thus accepted that Ngudjolo admitted to her that he had organized the attack but it refused to accept his confession as proof of guilt, among others, because it found it "possible" that Ngudjolo had falsely confessed to her in order to bolster his reputation in the Congolese army[30]. According to the Prosecution, the Chamber had interpreted and applied the standard of "beyond reasonable doubt" as to require proof beyond any doubt and therefore as requiring that the Chamber rejects *all* hypothetically possible contrary hypotheses before it can declare itself satisfied.

In its decision of 27 February 2015[31], the Appeals Chamber rejected the Prosecutor's arguments and upheld its acquittal decision. The most relevant part of the judgment is the dissenting opinion of Judges Trendafilova and Tarfusser. They stated that the Trial Chamber had erred in the methodology applied for the evaluation of evidence as it assessed "in isolation individual items of evidence and failed to properly consider the evidence in its entirety[32]". It referred to the *Lubanga* judgment and affirmed that individual pieces of evidence should not be subject on their own to the "beyond reasonable doubt" standard but rather as a whole: "This holistic approach, whereby individual pieces of evidence are assessed in light of the totality of the evidence, enables a trial chamber to verify the reliability and the credibility of the material that will form the basis of its final determination pursuant to article 74(2) of the Statute[33]". Furthermore, they argued that the Trial Chamber required proof of facts with almost absolute certainty and that the Majority tolerated this practice. The dissenting opinion then focused on the difference between the standard of "beyond reasonable doubt" and proof "beyond any doubt" and defined the first one as a standard that does not leave room for "imaginary doubts or speculative observations on the guilt or innocence of the accused that cannot be reasonably derived from the evidence[3435]". Here it is possible to refer once again back to the alternative hypotheses approach which eliminates hypotheses by choosing the one that shows itself as "evidentially superior to the others in

[30] ICC, *The Prosecutor v. Mathieu Ngudjolo Chui*, Second Public Redacted Version of "Prosecution's Document in Support of Appeal against the 'Jugement rendu en application de l'article 74 du Statut' ", ICC-01/04-02/12-39-Conf, 19 March 2013.
[31] ICC, *The Prosecutor v. Mathieu Ngudjolo Chui* , Appeals Chamber, Judgment on the Prosecutor's appeal against the decision of Trial Chamber II entitled "Judgment pursuant to article 74 of the Statute", ICC-01/04-02/12-271, 27 February 2015.
[32] Joint Dissenting Opinion of Judge Ekaterina Trendafilova and Judge Cuno Tarfusser, ICC-01/04-02/12-271-AnxA, Appeals Chamber Judgment, 27 February 2015, para31.
[33] *Ibid*. para 35.
[34] *Ibid.* para 56.
[35] See for more ICTY Appeals Chamber in *Mrkšić* and *Šljivančanin*: "the proof must be such as to exclude not every hypothesis or possibility of innocence, but every fair or rational hypothesis which may be derived from the evidence, except that of guilt.", ICTY, Appeals Chamber*, Prosecutor v. Mile Mrkšić and Veselin Šljivančanin*, "Judgement", IT-95-13/1-A, 5 May 2009, para. 220.

terms of completeness and quality of evidence[36]". It is the duty of the prosecution to eliminate the reasonable alternative hypotheses which are not scepticism or speculation.

3. CONCLUSION

This research aimed at answering the following questions: has the International Criminal Court adopted Cohen's Alternative Hypothesis Approach in the *Al-Bashir* and *Ngudjolo* cases? What are the problems connected to this kind of approach? Is this a suitable approach to evidence in the ICC?

First of all, it is possible to affirm that in the *Al-Bashir* case, the Appeals Chamber definitely endorsed an approach to fact-finding based on the idea of excluding all possible reasonable hypothesis apart from the one it decided to adopt. This can't be said with the same clarity with regards to the *Ngudjolo* case, where this view is taken only by the judges in the dissenting opinion.

Concerning the main criticism against non-mathematical approaches to evidence, it has been argued that Cohen's justificatory argument has the defect of circularity: judges reason inductively and therefore they should reason inductively "without regard for the axioms of mathematical probability[37]". According to critics, the very fact that judges "do reason inductively […] is also supposed to supply the justification for common habits of thought and reasoning, presented as a distinct and peculiarly well-adapted species of probabilistic evaluation of evidence" and Baconian probability amounts just to a "fancy-sounding way of dignifying 'common sense' jury reasoning[38]".

Further, Cohen argues that all reasonable doubt about an accused's guilt are eliminated when the process of elimination has been completed successfully. But one question which might arise concerns when it can be said that every "innocent explanation has been eliminated". When can the judges conclude that there's only *unreasonable* doubt left?[39]

On this line of reasoning, since it is undisputed that absolute certainty is unattainable in our world, it is also possible that the hypothesis which survived the evidentiary tests turns out to be a false one. Although this might happen, the mere theoretical chance that a well-evidenced hypothesis may be false is inherent in every hypothesis and cannot be part of

[36] Klamberg (2013). *Supra* n. 4, p. 183-184
[37] Paul Roberts, Adrian Zuckerman, *Criminal Evidence*, Oxford: Oxford University Press, Oxford, 2010, p. 152
[38] *Ibid*.
[39] *Ibid.* p. 260

criminal adjudication. This assumption only proves that no inferenece about the physical world is absolutely sure.

With regards to whether this approach is suitable for the ICC, the author's opinion is that it is. There is no space for a pure mathematical approach to evidence in International Criminal Procedure. First of all, the importance of applying a method must be stressed out as a safeguard from judges applying their subjective beliefs. Secondly, by excluding fair or rational hypothesis which are derived from the evidence, except the one of guilt/acquittal, the judges are able to exclude pure speculation. Finally, through Cohen's method, it is possible to analyse the completeness of a body of evidence and the circumstances under which this was obtained since the probative weight of the evidence is determined on how complete the testing was.

4. INDEX OF AUTHORITIES

Conventions and Treaties

UN General Assembly, *Rome Statute of the International Criminal Court* (last amended 2010), 17 July 1998

Cases

ICC, *The Prosecutor v. Omar Hassan Ahmad Al Bashir*, Warrant of Arrest for Omar Hassan Ahmad Al Bashir, No. ICC-02/05-01/09, 4 March 2009

The Prosecutor v. Omar Hassan Ahmad Al Bashir, Public Redacted Version of the Prosecutor's Application under Article 58, ICC-02/05-157-AnxA Public Document, 14 July 2008

ICC, *The Prosecutor v. Omar Hassan Ahmad Al Bashir* , Public Document Application under Rule 103 in respect of Prosecution Appeal against "Decision on the Prosecution's Application for a Warrant of Arrest against Omar Hassan Ahmad Al Bashir", ICC-02/05-01/09, 20 July 2009

ICC, *The Prosecutor v. Omar Hassan Ahmad Al Bashir*, Prosecution Document in Support of Appeal against the "Decision on the Prosecution's Application for a Warrant of Arrest against Omar Hassan Ahmad Al Bashir" No. ICC-02/05-01/09 OA, 6 July 2009

ICC, *The Prosecutor v. Omar Hassan Ahmad Al Bashir*, Judgment on the appeal of the Prosecutor against the "Decision on the Prosecution's Application for a Warrant of Arrest against Omar Hassan Ahmad Al Bashir", ICC-02/05-01/09 OA, 4 March 2009

ICC, *The Prosecutor v. Mathieu Ngudjolo Chui*, Trial Chamber II, "Judgment pursuant to article 74 of the Statute", ICC-01/04-02/12-3-tENG, 18 December 2012

ICC, *The Prosecutor v. Mathieu Ngudjolo Chui* , Appeals Chamber, Judgment on the Prosecutor's appeal against the decision of Trial Chamber II entitled "Judgment pursuant to article 74 of the Statute", ICC-01/04-02/12-271, 27 February 2015

ICC, *The Prosecutor v. Mathieu Ngudjolo Chui*, Trial Chamber II, "Judgment pursuant to article 74 of the Statute", ICC-01/04-02/12-3-tENG, 18 December 2012

ICC, *The Prosecutor v. Mathieu Ngudjolo Chui*, Joint Dissenting Opinion of Judge Ekaterina Trendafilova and Judge Cuno Tarfusser, ICC-01/04-02/12-271-AnxA, Appeals Chamber Judgment, 27 February 2015

ICTY, *The Prosecutor v. Delalic et al*, Appeal Judgment, IT-96-21-A, 20 February 2001

ICTY, *Prosecutor v. Vasiljevic*, Appeal Judgment, IT-98-32-A, 25 February 2004

Secondary Sources

Christian Diesen, *Beyond Reasonable Doubt - Standard of Proof and Evaluation of Evidence in Criminal Cases*, Scandinavian Studies in Law – Legal Theory, vol. 40 (2000), 169-180, p.169

D. H. Kaye, *Do We Need a Calculus of Weight to Understand Proof Beyond Reasonable Doubt?*, Boston University Law Review, vol. 66 (1986), 657-671

David A. Schum, *Probability and the Processes of Discovery*, Boston University Law Review vol. 66 (1986), 825-876

David Kaye, *The Laws of Probability and the Law of the Land*, The University of Chicago Law Review vol. 47 (1979), 1, 34-56

Karim A. A. Khan, Caroline Buisman, Christopher Gosnell, *Principles of Evidence in International Criminal Justice*, Oxford: Oxford University Press, Oxford, 2010

L. Jonathan Cohen, *The Probable and The Provable*, Oxford: Clarendon Press, Oxford, 1977

Laurence H. Tribe, *Trial by Mathematics: Precision and Ritual in the Legal Process*, Harvard Law Review vol. 86 (1971), 6, 1329-1393

Mark Klamberg, *Evidence in International Criminal Trials: Confronting Legal Gaps and the Reconstruction of Disputed Events*, International Criminal Law Series – Vol. 2, Martinus Nijhoff Publishers, 2013

Mark Klamberg, *The Alternative Hypothesis Approach, Robustness and International Criminal Justice - A Plea for a' Combined Approach' to Evaluation of Evidence*, Journal of International Criminal Justice, vol. 13 (2015): 535-553

Paul Roberts, Adrian Zuckerman, *Criminal Evidence*, Oxford: Oxford University Press, Oxford, 2010

Ronald J. Allen and Alex Stein, *Evidence, Probability and the Burden of Proof*, Arizona Law Review vol.557 (2013), 557-602, p.596.