## The Reverend and the Curious Case of the Crocodile in Winter

'Semper aliquid novi Africam adferre - Africa always brings us something new.'

With this remark the appeal judges began the judgment in *Ex Parte Rosch*, or as it may otherwise be called the curious case of the apparently wayward crocodile. The saying is attributed to the Roman historian, naturalist and lawyer, Pliny the Elder (23 AD to 79 AD); whose own reference likely came from a book by Aristotle – translated into Latin as the *Historia Animalium* – and which meant the area then also called Libya (referring to the whole of the then known Africa) and also specifically to animals from Africa. This essay is about a case which would have lend itself well to the application of a well known theorem, strongly believed to have originated with the Reverend Thomas Bayes about 1755. Bayes's theorem applies to the calculation of the likelihood of the occurrence of an event based on different conditional probabilities of assumed facts (credences). Courts generally do not like using the theorem; they believe human judges are better in effect, based on their skill and experience, in intuitively appraising probabilities. This is a dubious assumption. But for now back to the case.

On 12 December 1995, Mrs Rosch, the applicant in the High Court of South Africa, <sup>4</sup> seated at Johannesburg, applied for an order declaring that her husband Mr Michael Werner Franz Rosch (Rosch) be presumed dead; presumably to have died on 24 July 1995 in Mozambique. When a person has gone missing, generally under suspicious circumstances, or has been missing with no information forthcoming on her whereabouts and no body has been found for some time, a legally interested party (a person with a sufficiently strong legal or factual link to the missing person – usually a spouse or family member), a person with legal standing, may apply to a court to have the missing person declared dead so that her affairs and estate be finalized.<sup>5</sup>

Some well-known people have been declared dead. In 1965 the then Australian Prime Minister Harold Holt was declared presumed dead after he had gone swimming one morning in the sea off Melbourne and this while friends (inclusive of his alleged lover) were waiting for him on the beach. By all accounts he just walked into the water after saying he was going for a swim and was last seen swimming happily, but just never returned to shore. His body of course has never been found. (Some conspiricists speculated that he had been kidnapped by the Chinese, through means of a Chinese submarine picking him up). The well known and controversial American trade union leader Jimmy Hoffa also just disappeared after having gone to a local restaurant, where he was last seen outside of the restaurant getting into a car with an unidentified man. Many people were declared dead after the 9 September 2001 attacks on the World Trade Centre in New York as many hundreds of bodies were simply never found, albeit that here it was through declarations of presumption of death made by the

<sup>&</sup>lt;sup>1</sup> Ex Parte Rosch [1998] 1 All SA 318 (W).

<sup>&</sup>lt;sup>2</sup> I do not know with whom of the judges this comment originated but as counsel I appeared before each of them (and thus on opinion and biased evidence) I would attribute it to the late Judge Leveson: who was a very clever, moody, difficult, eccentric (often nearly all at the same time) but also redeemingly very well read and interesting judge. This is one's experience in practice too. Judges are human beings; most are decent, a couple are witty, several are quick, others too slow, a few are very difficult and some obviously are combinations of the aforementioned. But the ones you prefer to appear in front of know the law well and attempt to adjudicate cases on their merits – their own personalities being not important.

<sup>&</sup>lt;sup>3</sup> Translated by John Bostock and HT Riley *The Natural History of Pliny* (Henry G Bohn, London, 1857). Aristotle unsurprisingly did refer to crocodiles as well, specifically in Book II of the *Historia Animalium*.

<sup>&</sup>lt;sup>4</sup> Then it was called the Supreme Court of South Africa.

<sup>&</sup>lt;sup>5</sup> Legal standing thus refers to a legal or natural person who has a legal or beneficial interest or right to be heard in a proceeding before a court or tribunal; normally since or because her legal or beneficial rights or interest may be affected by any order or judgement made.

<sup>&</sup>lt;sup>6</sup> Bill Bryson *Down Under* (Doubleday, New York, 2000) at 65. A highly recommended read for anyone, not only for those who know or care about Australia, or like (or hate) the song by Men at Work.

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state and not in or by a court.

An application as a court procedure to obtain an order or judgement in South African law is brought generally supported only by evidence on affidavit and when no opposition or no factual disputes are reasonably foreseen, which will precipitate the need or call for oral testimony for the determining of the disputes of facts.<sup>7</sup>

Should a factual issue arise that cannot be determined on the papers (affidavit evidence), the application may be ordered to trial or verbal hearing with in that case verbal witness testimony and cross examination. The application may also be dismissed where the applicant should reasonably have foreseen opposition or serious factual disputes. <sup>8</sup>

And so, as mentioned above, the applicant as the wife of Rosch sought to have him declared presumed dead. Her own evidence was that she and Rosch were separated but they were still on good terms. Of Rosch himself we know very little, and depending on which side of the case you stand your views of his character may be diametrically different.

The main evidence applicant relied on for the application was from a Polish couple Mr Krzeminski and Miss Grabarska, who as tourists had been in Mozambique on 23 July 1995. They testified that they had met Rosch on that day in the afternoon at a hotel in Maputo, the charming and intriguing, as well as run-down and dirty (erstwhile colonial) capital of Mozambique. As they could speak only Polish and German and a little English, he had approached them (he spoke German) when he heard them struggle with the local language. Portuguese is generally spoken in Mozambique – it used to be a Portuguese colony. They invited Rosch to join them and had lunch together. Rosch said that he will show them 'the real Africa' and he organized a trip outside of Maputo for them for the next day.

The next morning the three of them left in a four wheel drive vehicle with a driver they said Rosch had arranged. They drove north and stopped the vehicle near Xai Xai – a beautiful tropical beach (and town with again decaying colonial buildings) about 200 km north from Maputo – but only after a several hours trip as the road was very bad. (I can confirm that the road was terrible still even a few years later when we then travelled on it, it had continual and massive potholes and had clearly not been maintained for many years). Rosch told the driver that he may leave them there and the driver did so. Rosch then said he needed to answer the call of nature and handed them his personal travel bag. He walked away from them for some distance and with good manners they turned their backs on him. 12

Suddenly, they heard him scream and they then saw him being attacked by a very big (they said 'huge') crocodile. The crocodile pulled him into some water, where they saw the water colour red and did not see Rosch again. They were horribly shocked. They flagged down a car and attempted to explain to the driver what had happened; he could not understand them and they asked him to write down the name of the place where he picked them up and he wrote the place name down in English. They handed in this piece of paper as evidence at the trial hearing. They also recounted these events to

<sup>&</sup>lt;sup>7</sup> The mentioned application procedure, or variations thereof, is generally used in many common law jurisdictions. For example, in striking-out or summary judgement applications generally only affidavit/statement evidence is relied upon.

<sup>&</sup>lt;sup>8</sup> Uniform Rules of Court of South Africa (Juta and Co), Rule 6(5)(a) and Rule 6(5)(g).

 $<sup>^9</sup>$  Ex Parte Rosch, above n 1, at 322h and 324b. Maputo used to be called Lorenço Marques.

<sup>&</sup>lt;sup>10</sup> Ex Parte Rosch, above n 1, at 322h-i and 324c-d. There are lovely (but not great) beers to be had in Mozambique and the protagonists may have had a couple of those; my own favourite is 2M, and to be enjoyed with hot, spicy (chilli infused – also called peri- peri) food and the others are Laurentina and Manica.

<sup>&</sup>lt;sup>11</sup> The initial war of liberation from the Portuguese (between 1965 and 1975) and then the civil war (1981-1989) had much to do with the state of the country's ailing and devastated infrastructure.

<sup>&</sup>lt;sup>12</sup> Ex parte Rosch, above n 1, at 324e.

the German and South African embassies. 13

So what do we make of this evidence? Does it seem reasonable and credible? As far as we can tell the witnesses had no known or obvious reason to lie. There was no evidence led that they knew Rosch before meeting him in Mozambique. (The absence of evidence is not evidence of absence, but there was no evidence in this regard to gainsay their version so it could be assumed that they did not know him otherwise than they testified). They seemed not to stand to gain from his death and it is improbable that they would have made up such a story – for one, it would be terrible malicious (to put it mildly) towards any relations of Rosch and indeed it would be easily refuted when or should Rosch make an appearance or reappearance. The story seemed plausible too, doesn't it? Think or imagine wild Africa, the bush, man-eating crocodiles, language difficulties, and a young couple on holiday.

You might say, to be highly critical, it was very convenient for Mrs Rosch that the couple was there when her husband was taken by the crocodile, and at least, somewhat surprising that they let their driver leave them without transport out in the bush. But there against, on their version they certainly were able to get a lift back to Maputo, so not too unreasonable perhaps.

In *Thinking Fast and Slow*, an excellent compilation of when and how our very human biases, intuitions and sometimes reactionary brains often lead us astray, the Nobel Prize winner Daniel Kahneman refers to a study done by his erstwhile colleague and friend the late Amos Tversky on how people form judgements on being presented with a story which contain a coherent account of the alleged facts and that lead to the institution of a civil court case. <sup>14</sup> In the study there were two opposite sides to the story – both coherent and each clearly open to another interpretation. Some participants were given one version only and thus read only the one side, some other participants read only the other version and a third group got to read both versions/sides. The presentation of one-sided evidence had a very definite effect on judgements. <sup>15</sup>

Those who read only one side were very confident of the justness or validity of the case they got; this was true for all those who got only a one-sided account despite these being the opposite sides of the account. However, those who got to read both versions were much less confident of either case being the right or just one. <sup>16</sup> The one side effect Kahneman calls the WYSIATI (what you see is all there is) feature of the human mind's manner of judging most things, including evidence. <sup>17</sup>

It will often serve one well, and as a lawyer more so, to take a little time to get as many facts as you can and importantly to think long and hard about them before taking any action. <sup>18</sup> Related to this is specifically asking your client/s and sometimes witnesses too what they say the other side will say or allege about your client's or witnesses' version. Many if not most times an answering affidavit or reply will cast a completely different and even perhaps embarrassing light on your client's version of events; which sometimes could well have been avoided if one had not simply taken a version or story at face value. <sup>19</sup>

And so it was in the curious crocodile case too; it did not end with the above version of events.

<sup>&</sup>lt;sup>13</sup> Ex parte Rosch, above n 1, at 322j and 324f-h.

<sup>&</sup>lt;sup>14</sup> Daniel Kahneman *Thinking Fast and Slow* (Farrar, Straus and Giroux, New York, 2011) on 86 -87. This book cannot be more highly recommended.

<sup>&</sup>lt;sup>15</sup> Kahneman, above n 14, at 87.

<sup>&</sup>lt;sup>16</sup> Kahneman, above n 14, at 87.

<sup>&</sup>lt;sup>17</sup> Kahneman, above n 14, at 86.

<sup>&</sup>lt;sup>18</sup> What are facts? Broadly stated facts are what the court finds on evidence presented (or agreed to) to have happened. Generally in law there is no philosophical enquiry as to what facts are. Courts act on the assumption that there is an objective reality which is forensically determinable. Samuel Arbesman in *The Half-Life of Facts* (Current, New York, 2012) paraphrased Justice Potter Stewart as such '[we] know a fact when we see one.'

<sup>&</sup>lt;sup>19</sup> See (if you can) Eric Morris *Technique in Litigation* (Juta & Co Ltd, Cape Town, 1985) at 252. There are later editions but I am fond of this one – it has the author's personal touch understandably missing from the later ones.

After the application was launched by Mrs Rosch two insurance companies were joined in the case on their own request as respondents, (these type of joined parties are known in South African law as intervening parties),<sup>20</sup> and they opposed the order sought by Mrs Rosch – they would have had to pay out to the applicant on certain insurance policies taken out by Rosch which gave them a clear legal interest in the case. They were not convinced that the version given by the Polish couple was the truth. It was their opposition that led the initial application to be referred to trial and the hearing of verbal testimony.

The respondents had no direct evidence (for example, eyewitnesses and forensic scene evidence) on the crocodile attack and thus led evidence of a circumstantial nature. It included the following. Mr AC Pooley, an undisputed expert (meaning the other side, in this case the applicant, did not take issue with the experience, knowledge, qualifications or competency of Pooley to give specialized evidence on a subject on which the court is relatively ignorant – despite Pooley not having been directly involved in the case at all) on crocodiles, and particularly on crocodile attacks in southern Africa, gave telling evidence.

He testified that he had kept records on all crocodile attacks<sup>21</sup> in the countries of southern Africa from 1950 up to 1995. He said that the statistical (and in effect causal) base rate for crocodile attacks (how many other attacks had happened over that time period) at this time of the year in winter in all those years was zero.<sup>22</sup> That is, no attacks had ever been recorded in the month of July in these areas: the reason for this he said is that crocodiles are cold blooded creatures that during the winter months stay without food and remain largely inactive. Their physiology is such that they cannot digest food if the outside temperature is below 18 degrees Celsius. He added that even in the unlikely event of a crocodile attacking in winter the attack would have occurred in the late afternoon towards dusk and only after the crocodile had spent the whole day lying in the sun to warm up. It was the view of Pooley that the version of the couple was very unlikely and extremely improbable.<sup>23</sup>

In my own research, I found a newspaper article quoting from a report by the Mozambican government on the number of crocodile attacks in Mozambique in 2011. Mr Alberto Murillo, spokesman for the Mozambican government, said that there had been 47 people reported killed by crocodiles in that year.<sup>24</sup>

The author trawled the internet to find possible instances of (obviously) reported attacks during the winter months (actually from May to August – but specifically of course in June or July) in southern Africa. Of the reports found there was not one in winter, but one in autumn, reported to have happened on 1 May 2005 in northern Mozambique. I do not suggest that my on-line search (being kind to myself) was exhaustive or statistically meaningful, but nevertheless I found 16 other instances of crocodile attacks that had all occurred in summer in relatively the same area and hence

<sup>&</sup>lt;sup>20</sup> The legal notion and procedure of having intervening parties are well known in nearly all common law systems.

<sup>&</sup>lt;sup>21</sup> The crocodile involved in these attacks in southern Africa is the Nile crocodile (*Crocodylus niloticus*). On average, the adult male Nile crocodile is between 3.5 and 5 m in length and weighs from 225 to 750 kg.

<sup>&</sup>lt;sup>22</sup> Ex parte Rosch, above n 1, at 325d-g.

<sup>&</sup>lt;sup>23</sup> Ex parte Rosch, above n 1, at 325d-g.

<sup>&</sup>lt;sup>24</sup> See generally Kevin M Dunham, Andrea Ghiurghi, Rezia Cumbi and Feredinando Urbano in 'Human-wildlife conflict Mozambique: a national perspective, with emphasis on wildlife attacks on humans' in *Fauna & Flora International* (2010) Oryx 44(2) 185, at 187. Relying on Mozambique government statistics they say that crocodiles killed 134 and injured 36 people in the period July 2006 to September 2008. Unfortunately no data is referred to as to which specific months or times the attacks occurred. They at least confirm that the attacks were widespread across Mozambique.

<sup>&</sup>lt;sup>25</sup> Author's search of the CrocBITE database (www.crocodile-attack-info, a database supported by the Charles Darwin University) on world-wide crocodile attacks also confirms the general absence of crocodile attacks in Mozambique during the winter months, with all attacks being in summer, spring or autumn, and no attacks reported in winter for the period 2002 to 2009.

approximate climate.

In another essay we look at a case arising out of the attempted coup in Equatorial Guinea in 2004 by a group of mercenaries led by Mr Simon Mann, an ex SAS soldier and officer in her majesty's armed forces turned soldier for fortune (deliberate variation on the usual phrase). I mention this here simply as an interesting aside for the following reason. Mann was captured in Zimbabwe (a country bordering on western Mozambique and that also have many crocodiles) by the Zimbabwean military – after being betrayed by them too – on his way to attempt the coup. He wrote a book about these events and his general exploits called *Cry Havoc*. It reads to me like narcissistic school boy propaganda and is not suggested reading but what is pertinent is one of his therein oft-repeated fears. Namely, that while being held captive in Zimbabwe he was going to end up as crocodile food or he will be killed and his body disposed of by feeding it to the crocodiles. He wrote that during March 2004 he had been taken to a river by his guards who kept on saying to him that they were going to shoot him and who taunted him: <sup>26</sup>

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"Are you afraid? How tough are you? Who cares where you are? How long will it be before anyone misses you..Are you ready to die? Would you like us to kill you..or leave you for the crocodiles to finish you..?...Please kill me first. Please don't leave me for the crocodiles...'I say. But not to them. I say it to myself."

As he was also held captive over the summer months, it was probably not unreasonable to fear ending up as crocodile food.

Back to the case: The next witness testified that the note allegedly given to the couple by the driver of the car that picked them up seemed suspect in that the names written on it were written in English and not in Portuguese, as one would have expected a note to be in if written by a Portuguese speaking person.<sup>27</sup> Mozambicans speak Portuguese (and other local African languages), seldom English (even more so in 1995); as stated Mozambique used to be a Portuguese colony.

Evidence was also given on commission (that is, the court travels for reasons of expediency to a place other than where it is sitting and hearing the case to cause the taking down of evidence from witnesses at another location) in Maputo, Mozambique by the commercial director of the Mozambican telecommunications company and the hotel manager of the hotel where the Polish couple stayed. The director's evidence was to the effect that the couple could not have made certain telephone calls on the date and at the time they said that they did so, but rather that they made these telephone calls when on their version given under oath in court they would not have been physically present and able to do so.<sup>28</sup>

Moreover, according to the computer print-outs from the telecommunications company that reflected exactly when, the date and time, the said telephone calls were made, the couple – on their own version – had to have been on the road to Xai-Xai with Rosch. The evidence by the couple of being on the road to Xai- Xai with Rosch on a specific date and time then obviously could not be correct, as they without doubt made the telephone calls in Maputo during exactly that time, and hence serious doubt was cast on their veracity as witnesses. The evidence as to the hotel telephone calls and the timing thereof was confirmed by the hotel manager as the said calls were also recorded in manuscript by the hotel, since and as the couple had to pay for the calls and which they also duly did.<sup>29</sup> The calls were thus made in Maputo at times when it would have been impossible for the couple on their version to be back in Maputo.

<sup>&</sup>lt;sup>26</sup> Simon Mann Cry Havoc (John Blake Publishing Ltd, London, 2011) at 197.

<sup>&</sup>lt;sup>27</sup> Ex parte Rosch, above n 1, at 326 b-c.

<sup>&</sup>lt;sup>28</sup> Ex parte Rosch, above n 1, at 326g-h and 330d-e.

<sup>&</sup>lt;sup>29</sup> Ex parte Rosch, above n 1, at 326g-h and 330a.

There was also evidence that Rosch was in financial difficulty at the time of his disappearance – he owed a few hundred thousand rands (then about a hundred thousand US dollars) to creditors which he was not able to pay. He had furthermore taken out an accident insurance policy on his life only a few months before his disappearance.<sup>30</sup>

The Appeal Court agreed with the lower court that there was very serious doubt as to the applicant's case and found that the probabilities – as raised by the evidence from the respondents – were against it. It upheld the lower court's dismissal of the application.<sup>31</sup>

The author has been unable to establish who counsel for the respondents was in this case and hence do not know how it came about that the respondents become suspicious in the circumstances of the case.

In hindsight it seems obvious that counsel could or should have called as a witness an expert on crocodiles and crocodile attacks or at least get such an expert's opinion, but it surely was not so at the time when the only and initial facts 'known' would have been the version of the applicant's witnesses. I certainly did not know that crocodile attacks are nearly unheard of in winter in southern Africa and I used to live there. Crocodiles are still common in Mozambique and were so in 1995 and reports of crocodile attacks in southern Africa were and are certainly frequent enough to not cause immediate suspicion.<sup>32</sup> This fact, of the absence of crocodile attacks in winter, was then in effect one of those unknown known facts to use the notorious categorization of facts attributed to the former Secretary of Defence, Donald Rumsfeld.<sup>33</sup> Few people would have been suspicious before the evidence of Pooley became available.

Who would have known that crocodile attacks, and hence the statistical base rate for such attacks, in July was so low, on the evidence was zero.<sup>34</sup>

Consequently, this case can also be seen as an example of the standard problem of statistical inference from evidence when one compares statistical evidence and other non-statistical and conditional evidence, and finally then the application of Bayes's Theorem.<sup>35</sup> As mentioned, Bayes's Theorem allows the calculation of the probability of an event depending on the conditional qualifications.<sup>36</sup> To apply Bayes's Theorem, you need to produce likelihood ratios for the various different pieces of evidence.<sup>37</sup>

In this case there were really three main bits of relevant information: a base rate of very likely nil crocodile attacks in winter; the direct eye witness testimony of applicant's witnesses and the computer and telephone record evidence. One then asks a series of questions: If applicant was attacked in Mozambique, what is the chance that the attack happened in winter at the time testified – a possible ratio of 20 to 1; as we do not know what the specific number of attacks was so on the evidence presented we make an extremely wild but still a very conservative guess. Second, if Rosch was attacked, what is the chance the two eye witnesses would say he was (very likely, so perhaps a 90 percent chance of them telling the truth, and 10 percent chance of not) and that gives ratio 1 over 9.

<sup>&</sup>lt;sup>30</sup> Ex parte Rosch, above n 1, at 322g.

<sup>&</sup>lt;sup>31</sup> *Ex Parte Rosch*, above n 1, at 330c -331d.

<sup>&</sup>lt;sup>32</sup> See Kevin M Dunham, Andrea Ghiurghi, Rezia Cumbi and Feredinando Urbano, above n 21, at 187.

<sup>&</sup>lt;sup>33</sup> Department of Defence News Briefing (12 February 2002), *United states Department of Defence*: "We also know there are known unknowns; that is to say we know there are some things we do not know."

<sup>&</sup>lt;sup>34</sup> Statistical base rates are facts about a population to which an item belongs, but not apparently relevant to an individual item or case. See Kahneman, above n 11, at 166 and 168, for an explanation of the problem of the underweighting of statistical base rates in judging probabilities.

<sup>&</sup>lt;sup>35</sup> See generally Gerd Gigerenzer *Rationality for Mortals* (Oxford University Press, New York, 2008) at 145-146.

<sup>&</sup>lt;sup>36</sup> Peter Donnelly 'Appealing Statistics' Significance (2005) Volume 2 (1) 46 at 48.

<sup>&</sup>lt;sup>37</sup> Gerd Gigerenzer, above n 35, at 145-146 and 174 -175 and Peter Donnelly, above n 36, at 48.

<sup>&</sup>lt;sup>38</sup> The correct ratio was probably much higher, closer to a hundred to one.

An objection could be that we should treat each of the two eye witnesses' evidence separately and so add another bit of evidence with the same or perhaps less probability weight. The short answer though is the two witnesses were not independent of each other; still we value the probability of their combined evidence being true high at 9 to 1). The third piece of evidence, the hotel and computer telephone record evidence is likely correct 75 per cent correct versus 25 percent not (ratio 3 to 1). We then apply Bayes's theorem by multiplying the probability ratios of 20 over 1, with 1 over 9 and finally by 3 over 1 which gives us an answer of 6.666. The chance of the attack having happened was thus only 1 in 6 (6.666 rounded down).

As you do this Bayesian exercise there are of course issues as to the agglomeration or separation of various pieces of evidence.<sup>40</sup> In explaining the aforementioned, without the witnesses' direct testimony the probability of an attack on the statistical evidence was very low. As soon as the possible fact or alleged fact (eye witness evidence of an attack in winter) came to light the probabilities had to change, rising in favour of the applicant, but then again the probabilities are decreased by the contradicting computer and telephone record evidence.<sup>41</sup> And so, as shown, the chance of Rosch having been attacked (even taking into account the direct eye witness testimony) would on mathematical probability still have been less than 16 percent.

The courts in England and Wales are unwilling to accept evidence based on the Reverend Bayes's Theorem – at least in criminal trials. In *R v Adams (No 2)*, the Court of Appeal said such evidence 'was a recipe for confusion, misunderstanding and misjudgement possibly among counsel, probably among judges and most certainly among jurors' and thus such evidence was inadmissible. <sup>42</sup> This is perhaps an unfair view of jurors and I will address it in another essay. In the curious crocodile case it would have been helpful and have supported the eventual outcome.

This case illustrates not only how important it is to have the right or relevant evidence but also to know that there actually is relevant evidence and also witnesses available. If the legal team for the respondents had been unaware of the availability of Pooley or of the import of the type of evidence that he might give, it would certainly have made their task in opposing the application much more difficult.

What on the other hand would the situation have been if the applicant had been able to produce credible evidence that at least one such crocodile attack – in June or July in Mozambique and earlier in the day – had taken place during these relevant months over the past 2 years or so? Such evidence likely, I believe, in the court's view would have gone a long way to negate the evidence of Pooley. Courts (like almost all people) are generally loath to disbelieve direct witness testimony when such is weighed against most statistical evidence. The court could well have overweighed the credible once-off attack evidence. We will deal with the fallibility of eye witness testimony in another essay;

<sup>&</sup>lt;sup>39</sup> As can be seen the ratios (the estimates of the probability of evidence being true against probability of not true) are all important to determine the most probable chance of an outcome.

<sup>40</sup> See Peter Donnelly, above n 36, at 48.

<sup>&</sup>lt;sup>41</sup> See Peter Donnelly, above n 38, at 47.

<sup>&</sup>lt;sup>42</sup> R v Adams (No 2) Times Law Reports (3 November 1997) CA at 3. In R v Adams (No1) [1996] EWCA Crim 222 at 227-228 Bayes's Theorem evidence was admitted without objection and indeed its application was common ground in the lower court, but its admission was deplored in the Court of Appeal. The Court of Appeal Judgement is nevertheless worthwhile reading in order to understand Bayes's Theorem.

<sup>&</sup>lt;sup>43</sup> Applying Bayes's Theorem also to a proved winter attack and to the rest of the evidence, one such attack would not have been enough for the applicant to succeed; but on the usual or normal principles of evaluating evidence in court (more so if the attack had happened in the same area and evidence was given by an apparently credible witness) this may in a court's view well have negated Pooley's evidence.

<sup>&</sup>lt;sup>44</sup> The exception in this regard seems to be DNA evidence, which appears to be nearly irrefutably and it can well be argued is indeed often misunderstood as to the probabilities suggested by the match probability and hence allows the Prosecutor's fallacy to arise; see in this regard generally *R v Doheny and Adams* [1996] EWCA Crim 728 at 733-735.

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for now all that need be said is it is much more fallible than commonly accepted. Of course in this case the applicant would still have had trouble explaining the couple's telephone calls discrepancies among other evidence and so may still have lost.

One can easily imagine the relief of respondents' counsel in obtaining the evidence of Pooley, and one can as effortlessly imagine the joy of counsel for the applicant who hypothetically had obtained evidence of one attack in exception to the evidence of Pooley. Counsel will often be confronted in her legal career with situations where the evidence against her client is improbable, even sometimes highly improbable but such evidence is direct eye witness testimony and one has to attempt to discredit that by cross examination; since her client only had circumstantial evidence to present there against. This is often very difficult to put it mildly. We probably can assume that the applicant did attempt to obtain evidence of an attack in winter in Mozambique or at least in southern Africa but could not. Such evidence would have been indirect but admissible and relevant to a limited degree as to the couple's testimony.

In this case, as another aside, moreover if there were not the resources of the insurance companies – the respondents – involved in the case, and thus the evidence they financially could afford to obtain, it is quite possible the application would have succeeded. A judge would probably have found the applicant's story coherent (WYSIATI) if the application had remained unopposed. It takes financial means to investigate evidentiary sources and to obtain expert testimony, and to obtain evidence in other countries. <sup>45</sup>

<sup>&</sup>lt;sup>45</sup> For example, there are travel and accommodation costs to pay for the legal teams, the costs of interpretation and translation.