Dr Ball: “Statistical analysis is not about making sausages”

Introduction

On the 13th of March, 2002, Doctor Patrick Ball took the stand as a prosecution witness against Mr. Milosevic at the ICTY. He was the first expert witness and the 18th witness overall. Up to then it had been a woeful display by the prosecution witnesses. The prosecution had somehow inadvertently ended up bolstering the defence's case that ethnic Albanians were not in fact living in an apartheid style system and were in fact given exactly the same privileges as the other ethnic groups in Kosovo.

Mahmut Bakalli, for example, admitted that children could study in the Albanian language at state schools, that the Albanian language could be used in court and that many of Kosovo's politicians were ethnic Albanian. Another witness, a lawyer from Djakovica, Hasan Pruthi, admitted that the largest local employer "The Emin Duraku company" employed well over 6,000 workers, the vast majority of whom were ethnic Albanian, including the company director. Others came across as being rather economical with the truth whilst Agim Zeqiri simply refused to answer any questions from Mr. Milosevic. Up to that
point, all the crimes the prosecution witnesses claimed had been committed by the Yugoslav security forces were hearsay, often third hand, and easily dealt with by the defendant.

So when the Californian social scientist and human rights activist took the stand and claimed that "the findings of this study are consistent with the hypothesis that action by Yugoslav forces was the cause of the killings and refugee flow" then at last it seemed that Mr Milosevic had met his match. The World's media certainly thought so. The London Independent reported "With more techno-boffins scrutinising human rights abuses, repressive governments may find it far more difficult to get away with murder" whilst the LA Times claimed "The numbers, he (Doctor Ball) said, establish a clear pattern: The culprit was an organized campaign of "ethnic cleansing" by Yugoslav military and paramilitary forces under the command of Milosevic."

Dr. Ball had an impressive CV. He had previously worked on human rights projects in countries as diverse as Sri Lanka, Guatemala (twice), South Africa, for the Truth and Reconciliation Commission, Haiti, Ethiopia (twice) and El Salvador.

In March 1999 he was asked by HRW to assist them in Kosovo so he traveled to the Albanian-Kosovo border at Vrbnica on the Kosovo side and Morina on the Albanian side. He noticed that the Albanian border guards were writing down lists of ethnic Albanians leaving Kosovo. Also recording the numbers of refugees, further down the road in Kukes, were UNHCR, who were recording the numbers using "clickers".

As well as this refugee data, Mr. Ball later calculated the number of violent deaths of ethnic Albanians during the Kosovo war, from the end of March to mid May, using sources such as narrative records – from HRW, American Bar Association etc – from administrative records and exhumation records conducted by international teams.

Therefore Dr Ball had two records to work with: one of the ethnic Albanian exodus and the other of violent deaths of ethnic Albanians between late March and early June, 1999.

**Doctor Ball’s Observations**

**Dr Ball:** "There seem to be three quite distinct phases or points at which refugee flow is high. Accordingly, we considered three possible causes that might account for this peak and trough pattern."
Doctor Ball and his colleagues decided that three possible causes for these peaks and troughs were
a) KLA activity,
b) NATO air strikes
and finally
c) Yugoslav force activity

Dr Ball: "Our idea is that if something is to cause something else, then the cause must precede the effect. Accordingly, we looked at the peak level of killings and refugee flow for each municipality. There are 29. We then considered whether, during the two-day period of the peak or in the preceding two-day period, there was some KLA activity. If we found any KLA activity whatsoever in the period of the peak or in the period immediately preceding the peak, we counted that in the first row. However, if we found KLA activity either not at all in that municipality or following the peak, we counted it in the second row. Finally, if KLA activity preceded the peak of the killings or refugee flow by more than four days, we counted that as an inconclusive pattern."

He did the same with NATO bombing in relation to refugee and killing peaks.

Doctor Ball also noted something important. The Yugoslav forces announced a unilateral ceasefire for the Orthodox Easter. There was an "extreme decline in the number of killings and refugee flows observed during the period 6/7 April, 1999, (which) coincides with the unilateral cease-fire declared by Yugoslav authorities in recognition of Orthodox Easter."

Doctor Ball carried out more analysis and found that the killing of ethnic Albanians just prior to a peak in refugee flow was "quite high", 69% for killings before the peak refugee flow and 83 per cent for killings which coincided with or occur just before a very high refugee flow. i.e. Killings and migration tended to go hand-in-hand.

**His Conclusions**

Dr. Ball: "First, we rejected the hypothesis that NATO involvement caused either killing or the migration. Second, we reject the hypothesis that KLA activity caused the patterns, the statistical patterns, of killing."

The only proviso was that "there does seem to be some correlation at certain times and certain regions between KLA activity and
refugee flow."

Most importantly, Doctor ball concluded that "the findings of this study are consistent with the hypothesis that action by Yugoslav forces was the cause of the killings and refugee flow"

Unfortunately, even a cursory examination of his research shows some glaring flaws in the data used, shoddy reasoning and a rather naïve and simplistic view of human nature and how human beings behave when caught up in a war.

Criticisms

A) Tomorrow's Fish And Chips

Doctor Ball never made the claims about his research that many newspapers reported.

Dr. Ball: "It is beyond the capacity of statistical analysis to prove that any of these hypotheses is the definitive cause of the patterns seen in the two forms of violence."

And

Dr Ball: "The statistical analysis and correlations cannot prove that the Yugoslav forces were the external influence responsible for the observed patterns".

Also

Dr Ball: "We are clear throughout the report that we do not make affirmative proofs in this report or in any of the various addenda."

These statements are at odds with many headlines in the media.

B) War For Idiots

If that were not enough, Dr Ball only had three hypotheses, NATO bombing, KLA activity and Yugoslav activity to try to explain the killings and the migration. There are, in such a complex war as Kosovo 1999, many more hypotheses, for example, the announcement of NATO air-strikes or perhaps KLA threats and calls urging people to leave.

Dr Fruits, the defence expert witness, commented:
Dr Fruits: "In economics, there's a theory or a principle called rational expectations. A gentleman by the name of Robert Lucas received the Nobel prize for developing this theory, and it's a relatively straightforward theory. It simply says that people take into consideration expectations, and those expectations can be formed by announcements, threats, or promises."

An Ethnic Albanian victim of NATO bombing. This convoy was returning to the village when it was hit. Talks with Yugoslav officials had convinced the ethnic Albanians not to leave Kosovo and instead to return home. Two ethnic Albanian convoys returning to their village were bombed by NATO with huge loss of life. Not a single column leaving the country was bombed. A coincidence?

What about the psychological effects of KLA orders for all ethnic Albanians to leave Kosovo? In fact the Chief of Staff of the KLA testified that the KLA ordered civilians to withdraw alongside them. Doctor Ball took no account of warnings from Yugoslav authorities, the KLA or NATO concerning impending bombings or battles.

C) Dr. EyeBall

One of Doctor Ball’s findings was the deaths and migration of the ethnic Albanians is correlated. Unfortunately, Doctor
Ball never carried out a correlation analysis. Instead he simply made a very superficial and subjective "eyeballing" of the two graphs. There were in actual fact large divergences between killings and migration, something which Dr Ball overlooked. In addition, in his first paper published, he admitted that "refugee flows did not coincide with mass killings."

D) Play It Again Sam

He only got data for the refugee "migration" from one border crossing. A single border crossing. "Of all the border crossings in all the World" as Humphrey Bogart might have said. Hardly a thorough and exhaustive database to work with.

The Morina border Crossing. Dr Ball's entire migration study came from this modern, bustling, metropolis.

E) Ethnic Minorities Anybody?

In addition, there's absolutely no comparison at all with numbers of refugees from the myriad minorities in Kosovo: ethnic Turks, ethnic Serbs, Roma, ethnic Macedonians, ethnic Montenegrins, ethnic Egyptians, Gorani, Jews, ethnic Croats, etc. Doctor Ball wasn't interested in their flight but surely a comparison would have been extremely important.

Note: By 1999 there were no longer any Circassions left in KosMet, they'd been ethnically cleansed by the KLA the previous year.
F) Loyalist Albanians anybody?

There was no mention at all of the large number of the loyalist ethnic Albanians who fled further into Yugoslavia. Reports mention many tens of thousands. Nor was there any talk of Yugoslav forces often refusing to let ethnic Albanians enter Albania because of fighting, and instead sending them into deeper into Yugoslavia, often to Montenegro. If there was indeed a Yugoslav policy of forcing the ethnic Albanians out of Yugoslavia it does seem strange for large numbers of refugees to be forced further into Yugoslavia.

G) Off By A Cool 50%

When looking at the Albanian border guards notes we enter the World of light farce. For a start their numbers didn't even come even slightly close to the "clickers" who were also recording the same group of ethnic Albanians. A whopping 50% difference in fact. 272,000 ethnic Albanians were noted by the Albanian guards whilst the "clickers" recorded 404,000 which means that at least one set of numbers is completely wrong. And maybe both numbers are.

Many of the border guards notes documents were also lost, and even the prosecution counsel were forced to concede that they were "very incomplete". According to Doctor Ball, the notes had been left after the border guards left their office in a hurry after some stray artillery fire made life difficult. The notes were left in a deserted building for who knows how long before Doctor Ball retrieved them.

Dr. Ball: "There was some broken glass and some broken wood inside the border post. I did collect the documents there from among the broken glass."

He found the notes just in time for "had I not collected them there, they would likely have been ruined by the weather in a day or two or whenever the next rainfall were to come.". He took them further into Albania where a landlord’s teenage son helped scan the 690 pages, along with his ethnic Albanian translator.

An HBO movie that writes itself.

H) Off By A Cool 150%

Faulty data didn't stop with the refugee numbers. Research carried out came to the conclusion that 4,400 ethnic Albanians
had been killed between March and May 1999 but Doctor Ball had other ideas. He decided that over 10,000 was a closer figure, a number he still holds to be true. Unfortunately, he seems to be in something of a minority here.

To date, some 10 years later, and the number is still way under 5,000. Last year a comprehensive count of those killed during the Spring of 1999 was made, and the ethnic Albanian total is slightly over 4,000. Even Natasa Kandic doesn't dispute these figures and she works very closely with the OTP.

So it looks like Doctor Ball's numbers be off by a tidy 150%.

I) Bought And Paid For

A lot of his research had been funded by the US government, the very same government whose planes were bombing Yugoslavia and funding the KLA. In fact, practically everyone involved in his work had a vested interest in seeing Yugoslavia and Mr Milosevic punished. The former HRW senior researcher, Mr. Abrahams, was a key figure in coaxing Dr. Ball to Kosovo in the first place and he testified for the prosecution.

Partisan sentiment doesn’t end there. For the narrative records that Dr Ball relied so much on, translators were obviously needed. They came from the “Council for the Protection of Human Rights and Freedoms”, an organisation that was made up of senior members of the KLA.

Of course there's also the Albanian border guards, all highly impartial and would under no circumstances alter any data of course. If that wasn’t enough, the prosecution provided a whopping 45% of data on KLA activities, all of which Dr Ball took on good faith. Even Dr Ball had some rather partial opinions about Mr. Milosevic.

He had referred to Mr. Milosevic as "one of the worst bad guys ever, at least in my lifetime." Is Dr. Ball honestly comparing Mr. Milosevic with Pol Pot or Mao? Has he never heard of the Cultural Revolution or the Killing Fields?

He also said "It would be very nice if we had a round of applause for the extradition of Slobodan Milosevic to The Hague last week. And I hope you're all excited as I am by the prospect of his very pleasant and drawn-out trial which will begin in about six months."

He later referred to his "under oath spin to Slobo". So he spins whilst under oath?

So much for being impartial.

J) Guessing Game
When the refugees crossed over the Morina border, none were asked how long it took them to get there so Dr Ball was forced to impute, or estimate/guess, when all 100% of them left their homes. In addition, 50% of the refugees hadn't given their address to the border guards, so yet again it was necessary to do more imputing, this time of where they lived. This imputation process introduces substantial errors into the data.

**K) Stealth Bomber**

For the NATO sorties, Doctor Ball used Yugoslav sources because he had testified that his enquiries with NATO HQ weren't helpful and claimed that this information was classified. He was wrong.

In fact, in 2000, NATO published this data. This raises two points. Firstly, he only made a very perfunctory couple of telephone enquiries to the lady at NATO HQ switchboard before giving up on finding the data, so how hard did he work on others aspects of his research?

Secondly, and even more worryingly, because he didn't use NATO sources, he made some very serious errors. For example, Dr Fruits, the defence expert witness in the Milutinovic trial, noted that for the period 2nd to the 4th of April Dr Ball had underestimated the number of NATO sorties by a factor of five.

So we're well on the way.