



www.aseasonofhappiness.com

TV Sleuthing – Close, but no Cigar!

is forensic science really like we see it on the box?

Most of us have been entertained and intrigued by crime investigations on TV and the movies. Of course, it isn't always about death and murder; but armchair sleuths can still pit their wits against the experts as they try to unravel what are often quite clever storylines. I have to admit that we are addicts of this kind of show, and always assumed the police and forensic analysts being portrayed pretty much followed real-life processes to resolve the cases. Then we happened to read some of our daughter's findings. She's at university studying forensic science and on many occasions she declared that what went on in some of these fictitious scenarios; although close to the truth, this wasn't how it was in reality.

Investigative science has evolved amazingly over the years, from the days when old-time law officers would decide a person's guilt based on very simple evidence that was nowhere near accurate; and in many cases, could be neither corroborated nor verified. All that mattered was assuming what went down, who was the likely suspect; then, most importantly, how to make the convenient findings stick. Initially, traces of blood were literally a dead giveaway. In the dim dark ages of police work even human or animal blood looked the same to them, so why complicate matters by trying to differentiate? Time eventually resolved that issue, and later still there was a way to test for individual blood types. Unfortunately, there weren't that many and even a fairly rare type could be shared by millions; so it was still really down to guess work.

Fingerprints were another method of placing a person of interest in a certain location; and sometimes at a specific time, depending on circumstances. The knowledge that every print is unique to a particular individual means that even a partial fingermark can identify who left it behind; always assuming there is a record somewhere to compare it with in order to find that suspect. Unfortunately, not everyone's prints are on the police database; but investigators have ways of overcoming this obstacle, as we've seen in both fictional and true stories. But what if there are no fingerprints?

Such was the case in 2014 when a carbonised human body was discovered in Brazil. Because of the condition, examination by the Legal Medical Institute of Belo Horizonte proved difficult. It was determined that the body was that of a male; but there were no fingerprints, and it was hoped that inspecting the teeth might help with identification. Here was another stumbling block. The victim's teeth were healthy with no evidence of dental treatment, so checking records was futile. The family claiming to be that of the deceased did, however, present six selfie photos taken by their missing relative on his mobile phone. By superimposing the selfie smiles over a picture of the teeth in the skull, it was eventually possible to confirm that this was indeed the body of the family's missing son.

Surely, you might be thinking, a simple DNA comparison could have saved all of that trouble and been proof positive. After all, that's what they do in the movies. Well, yes they

do; but in situations like this one, the body had been exposed to the elements, and DNA would only have remained for a few weeks. Had the victim been buried a metre or more below the surface, traces of DNA could have lasted from 1,000 to 10,000 years! Another popular misleading fictional story element is the extraction of DNA from hair samples. "Do you have a hairbrush or comb of theirs?" the detective might ask. There are two problems with this: DNA is obtained from the hair follicle, the root; but, except in very rare cases, not from strands of broken hair; and even if samples did have the follicles still attached, should they be more than a week old, the prospect of extracting DNA becomes increasingly unlikely.

Despite its overuse and perhaps misuse in fictional sleuthing, DNA analysis is still the number one tool of the real forensic analyst. Samples can be acquired from quite small deposits discovered at a crime scene; and providing the right tests are conducted, a match with a person of interest can help to place them on the spot, so to speak. Unfortunately, there may not be a sufficient amount of evidence samples to perform every single test, because, in some instances, the required procedure destroys the piece of evidence which is only good for one test. Clearly, when there is limited evidence, decisions have to be made with respect to priorities.

Ideally, the forensic analyst should be the one to make the choice based on their knowledge of what happened, where, maybe how, and possibly why? Who was responsible is not part of their job – that's over to the police. This can be a cause of conflict where the detective in charge knows what he or she wants to prove and directs the analyst to conduct specific tests that will back up the theory. It occurs very often in TV dramas, whereas it should never be tolerated in the real world; but bias, bullying and budget costs still play a part in deciding which tests to run when there are only limited evidence samples. Once these are gone due to the analytical procedures, all that's left is the detective's conviction that it was the right decision to steer the analyst in that direction. The forensic scientist, on the other hand, would be pretty dissatisfied; having been prevented from simply doing their job un-coerced and independently to the best of their expert ability; striving to discover the truth, the whole truth, and definitely nothing but the truth.

Despite differences of opinion among the ranks, crimes continue to be solved and missing or deceased persons identified, at least as far as the TV sleuths are concerned. And, believe it or not, much of the time it happens in the real world – usually, however, it takes longer than two hours, minus commercials.

For a look at some more informative articles on a variety of subjects just return to the webpage



Where every effort has been made to be accurate and fair-minded, comments and opinions expressed on this website are based on personal experience and do not necessarily reflect the views of the wider community or those groups and institutions mentioned. A Season of Happiness and its staff accept no responsibility for any outcome based on suggestions offered. What works for one may not work for others. Please bear this in mind.