APPENDIX I

Development and scope of fingerprint evidence.

Developed before the end of the 19th century, fingerprint evidence is based on a most important, but fundamentally very simple, proposition: no two persons, not even identical twins, have ever been known to have identical fingerprints. The history of the science is well set out in: Freckelton & Selby, Expert Evidence, Vol. 4, (The Law Book Company Limited, 1993) at para. 96.160:

> *"Sir William Herschel played a leading part in establishing the immutability of ridged skin. Throughout his life, Herschel took his own fingerprints and showed that they remained constant for over 50 years. He also made similar findings in relation to prisoners whose fingerprints were recorded periodically without any changes being noted. It is now recognised that prints are developed by the foetus during pregnancy and remain unchanged in pattern (but not in size, of course) throughout a person's life.*
>
> *Millions of prints are computer-stored and matched throughout the world. No case of different individuals having even a single identical print has ever been reported. Even identical twins can be separated on the basis of fingerprints. (Note: DNA fingerprinting does not distinguish between identical twins.)"*

Based on that simple but most important insight, the science has developed since its foundation in the 19th century, and has now achieved an extraordinary level of sophistication. In Heffernan, Scientific evidence: Fingerprints and DNA, (Dublin, 2006) the author **(**Dr. Elizabeth Heffernan of the Law School, Trinity College, Dublin**)** says at p.61:

> *"Although fingerprint testimony represents the subjective opinion of the expert, fingerprint experts have traditionally tendered statements of identity in more positive and assertive terms than experts in other forensic fields such as hair, fibre and soil. This authoritative tone has inspired judicial confidence but the willingness of the courts to admit fingerprint evidence also rests on certain important assumptions about predicate science itself; first, that fingerprints are unique in that no two fingers have yet to be found to possess the same characteristics; second, that fingerprints are permanent and will remain unchanged during an individual's lifetime; third, that fingerprints may be transferred to surfaces; and fourth, that fingerprints may be systematically classified. These virtues explain a preference for fingerprints over other impressions."*

As we shall see, the prosecution in the present case told the Circuit Court more than six years ago that the Gardaí were then "in the process of conducting tests" to see if the steering wheel of a Honda of relevant model and year would "take" a fingerprint. Nothing more has been heard of this test because the Gardai did not share the result of it even with the prosecuting solicitor.

But, on the basis of Dr. Heffernan's book, which is impressively learned both scientifically and legally, it seems overwhelmingly probable that up-to-date techniques would allow the development of fingerprints from almost any service remotely likely to be relevant. She says:

> *"The processing of latent prints has benefited from extensive scientific research and technological development over the past several decades. A multiplicity of methods for developing, enhancing and visualising prints are available depending upon the nature of the surface encountered at the crime scene. Powder*

dusting is one of the oldest physical methods of fingerprint detection for hard surfaces such as glass, metal or tile. Fine-grained particles of powder adhere to the fingerprints residue creating a contrast between the ridges and the background that may be further enhanced through the use of a magnetic brush.

In the case of porous surfaces such as paper, cardboard and fabrics, chemical techniques are preferred. The classic example is iodine fuming whereby an object of surface suspected of housing latent prints is exposed to iodine fumes. Fats and oily substances in the print residue absorb the iodine vapours resulting in a brownish stain. A prevalent chemical agent ninhydrin which reacts to the amino acids in the fingerprint residue by forming a purple-blue colour. The ninhydrin solution is typically sprayed onto the porous surfaces from an aerosol can and the prints appear within hours or, in the case of weaker prints, days. In the case of porous surfaces that have been wet at one time, a silver nitrate based chemical known as "physical developer" has gained widespread use. Super glue enhancement is another popular chemical technique, particularly as an initial step in the development of latent fingerprints. Based on the interaction between the super glue fumes and print residue, the technique is operationally similar to the iodine fuming and produces a friction ridge impression that is off-white in colour. Unlike chemical techniques, super glue enhancement has the merit of developing prints on non-porous surfaces such as metals, electrical tape, leather and plastic bags.

In addition to physical and chemical processes, fingerprint experts rely on special forms of illumination to visualise latent print whether initially at the crime scene or subsequently in the laboratory. The greatest innovation in this regard was advent of laser illumination which capitalises on the florescent capabilities of fingerprints residue; components found in perspiration absorb the light and reemit it in wavelengths longer than the illuminating source. The discovery of florescent inducing chemicals and development of coloured filters enabled fingerprint experts to achieve the same results using alternative, less expensive, high-intensity light sources such as quartz halogen. Operating alone or in tandem with other processes, special illumination techniques are a flexible and efficient means of facilitation fingerprints examination both at the crime scene and in laboratory.

It is important to emphasis the dynamism and versatility of latent fingerprint visualisation as a field of expertise. These are just some of the more commonly used techniques and each is subject to multiple variations. The field is in a constant state of flux adapting to the fruitful results of widespread, on-going research. Furthermore, the appropriate method for detecting fingerprints depends crucially on practical factors including condition at the crime scene and the location of the suspected prints…". (ibid 71-73).

APPENDIX II

American materials.

The American cases are of considerable interest and might usefully be referred to in a future case. Both State and Federal Courts have addressed the problems of loss of evidence, and of evidence not sought, or inadequately preserved, with what can only be described as considerable intensity. The United States Supreme Court has pronounced in favour of a test very similar to that favoured by the United Kingdom judges in **R. Ebrahim v. Feltham Magistrates' Court** [2001] 1 W.L.R. 1293. It represents a considerable change in previous American jurisprudence and, according to an academic authority has led to a "ongoing revolution by States against the standard set forth by the United State Supreme Court…", apparently on the basis that they were entitled to adopt a more ample protection for their citizens than the minimum required by the Supreme Court, or that State Constitutions mandate a different standard of protection.

The traditional United States approach was expressed in **U.S. v. Loud Halk** (1979, 9th Circuit Court of Appeals) 628 F. 2d 1139 where the test was expressed as follows:

> *"The proper balance is that between the quality of the Government's conduct and the degree of prejudice to the accused. The Government bears the burden of justifying its conduct and the defendant bears the burden of demonstrating prejudice".*

This unsurprisingly, is described in later cases and in academic literature as the "balancing test". However, it was overruled in **Arizona v. Youngblood** [1988] 488 U.S. 51. Here, there was a thorough going failure properly to pursue the scientific aspect of the investigation of an alleged sexual assault on a young boy. Rehnquist C.J., speaking for himself and four others, said that:

> "*We therefore hold that unless a criminal defendant can show bad faith on the part of the police, failure to preserve potentially useful evidence does not constitute denial of due process of law".*

The reason given by the majority for the requirement of bad faith is stated as follows:

> *"We think that requiring a defendant to show bad faith on the part of the police both limits the extent of the police's obligation to preserve evidence to reasonable bounds and confines it to that class of case where the interest of justice most clearly require it, i.e. those cases in which the police themselves by their conduct indicate that the evidence could form a basis for exonerating the defendant."*

Stevens J, concurred in the result but not in the opinion. He said:

> *"In my opinion, there may well be cases in which the defendant is unable to prove that the State acted in bad faith but in which the loss or destruction of evidence is nonetheless so critical to the defence as to make a criminal trial fundamentally unfair. This however is not such a case".*

Blackmun J. dissented in a judgment with which Brennan and Marshall JJ. agreed. Their dissent commends itself to me as a proper statement of the principles involved, in combination with the decision in **U.S. v Loud Halk** (1979, 9th Circuit Court of Appeals) 628 F.2d. 1139.

The three justices said that the majority had taken "*a radical step*" in the futile pursuit of a "*bright-line rule*". They held at p. 61 that:

> *"The Constitution requires that criminal defendants be provided with a fair trial, not merely a 'good faith' try at a fair trial. Respondent here, by what may have been nothing more than police ineptitude, was denied the opportunity to present a full defense. That ineptitude, however, deprived the respondent of his guaranteed right to due process of law".*

The minority pointed out that the U.S. Chief Justice's decision would restrain a trial in the single circumstance where (at p. 61) "police action affirmatively aimed at cheating the process violates the Constitution. But to suggest that this is the only way in which the Due Process clause can be violated cannot be correct. *Regardless of intent or*

lack thereof, police action that results in a defendant receiving an unfair trial constitutes a deprivation of due process". (Emphasis added).

Later they observed:

> *"…[I]t makes no sense to ignore the fact that a defendant has been denied a fair trial because the State allowed evidence that was material to the defence to deteriorate beyond the point of usefulness, simply because the police were inept rather than malicious…".*

and at p.69:

> "*The importance of these types of evidence is indisputable and requiring police to recognise their importance is not unreasonable."*

The entire controversy is surveyed in an article by Dinger: "*Should lost evidence mean a lost chance to prosecute? State rejections of the U.S. Supreme Court decision in Youngblood"* (27American Journal of Criminal law 329, Summer, 2000).

It is this author who claims that there is an "ongoing revolution by States" against the decision just summarised. I do not propose to cite the article other than to say that it analyses the jurisprudence of numerous State Courts and considers the issues of principle involved from every conceivable point of view. I have no doubt that our jurisprudence could

benefit from exposure to the thorough and earnest, not to say fraught, treatment of the topic in the United States Courts.

Subsequent American developments.

The foregoing Section on American authorities is taken directly from my judgment in **Dunne.** It will, of course, be observed that the opinion of Mr. Justice Blackmun (on behalf of himself and two other Justices) is of course a minority opinion. It is however one which, in my view, stands in the best tradition of American jurisprudence before the reaction which took place during the Chief Justiceship of Chief Justice Rehnquist, from the years of President Reagan until the Chief Justice's death some years ago.

The "**Youngblood"** case is of great interest both factually and legally. I have already referred to one academic authority on the history of the Youngblood doctrine. The story is brought more nearly up-to-date in an article by Dr. Norman Bay *Old blood, bad blood, and Youngblood: due process, lost evidence and the limits of bad faith* (2008-2009) 86 Wash. U.L. Rev. 241.

I will not trouble the reader with extensive citation from this article but will quote the conclusion, at pp 310-311:

"The passage of time has not treated Youngblood kindly either on the facts of the case or as a doctrinal matter. As a factual matter, Youngblood was innocent, and the actual perpetrator subsequently convicted. As a doctrinal matter, Youngblood was decided on the cusp of a revolution in forensic science. Dramatic advances in forensic DNA typing have undermined Youngblood's assumption that, as a matter of due process, the officer's subjective state of mind should matter more than materiality and prejudice to the accused when potentially exculpatory evidence is lost. Almost all states and the federal government have recognized the power of DNA testing and, in an implicit repudiation of Youngblood, have enacted innocence protection acts, many of which impose a duty to preserve DNA evidence.
Youngblood has also spawned incoherence among the state and federal courts that have tried to make sense of it. Disparities exist on such fundamental issues as the definition of "bad faith," whether the evidence must be potentially exculpatory or, in a nod to Trombetta, possess apparent exculpatory value and be otherwise unobtainable, and what the remedy is for a due process violation. Of course, the issue of remedy is largely theoretical. No matter how Youngblood is interpreted, bad faith is nearly impossible to prove.

The long arc of a constitutional doctrine is not always easy to trace. Some are enduring and deservedly so; they withstand the test of time. Marbury v. Madison and McCulloch v. Maryland for example, are deeply embedded within our constitutional order. Other constitutional doctrines, however well intentioned, do not hold up when tested by the complexities of fact patterns that arise in countless cases across the United States. Societal changes, or changes in the factual or legal foundations of a doctrine, often prompt a critical re examination. Or the doctrine itself may prove to be unworkable. In some instances, the doctrine itself must be refined; in others, it must be abandoned. Youngblood falls into the latter category. When it comes to the constitutional right of access to evidence, it is time to end Youngblood's myopic focus on bad faith and instrumentalism, to the detriment of an alternative vision of due process that promotes adjudicative fairness." (Emphasis added)

As appears from this extract, it is a startling fact that Youngblood was factually innocent. He was eventually freed (after he had served almost all his sentence), and the real culprit belatedly convicted.

These facts are recorded in a detached academic fashion in the Law Review article quoted above. A more thorough account of the case is given on the Innocence Project's website. I think it is quite significant enough to quote in full:

> *"Larry Youngblood was convicted in 1985 of child molestation, sexual assault, and kidnapping. He was sentenced to ten years and six months in prison. In October 1983, a ten year old boy was abducted from a carnival in Pima County, Arizona, and molested and sodomized repeatedly for over an hour by a middle aged man. The victim was taken to a hospital, where the staff collected semen samples from his rectum as well as the clothing he was wearing at the time of the assault.*
>
> *Based on the boy's description of the assailant as a man with one disfigured eye, Youngblood was charged with the crime. He maintained his innocence at trial, but the jury convicted him, based largely on the eyewitness identification of the victim. No serological tests were conducted before trial, as the police improperly stored the evidence and it had degraded. Expert witnesses at trial stated that, had the evidence been stored correctly, test results might have demonstrated conclusively Youngblood's innocence.*
>
> *Larry Youngblood appealed his conviction, claiming the destruction of potentially exculpatory evidence violated his due process rights, and the Arizona Court of Appeals set aside his conviction. He was released from prison, three years into his sentence, but in 1988, the Supreme Court reversed the lower court's ruling, and his conviction was reinstated (Arizona v. Youngblood, 488 U.S. 51).*

> *Youngblood remained free as the case made its way through the Arizona appellate court system a second time, but returned to prison in 1993, when the Arizona Supreme Court reinstated his conviction.*
>
> *In 1998, Youngblood was released on parole, but was sent back to prison in 1999 for failing to register his new address, as required by Arizona sex offender laws. In 2000, upon request from his attorneys, the police department tested the degraded evidence using new, sophisticated DNA technology. Those results exonerated Youngblood, and he was released from prison in August 2000. The district attorney's office dismissed the charges against Larry Youngblood that year.*
>
> *Shortly thereafter, the DNA profile from the evidence was entered into the national convicted offender databases. In early 2001, officials got a hit, matching the profile of Walter Cruise, who is blind in one eye and currently serving time in Texas on unrelated charges. In August 2002, Cruise was convicted of the crime and sentenced to twenty-four years in prison".*

No doubt there are those, in America and elsewhere, who at the time of Youngblood's conviction in 1985 and his Supreme Court appeal in 1988, would have said that the value of the evidence which had been allowed to degrade was merely "retrospective" or "speculative" but events proved that it was not. Similar things have been said in this case too: see above and below.

Youngblood had received a sentence of ten years and six months in 1985. He was released three years into his sentence when the Arizona

Court of Appeals set his conviction aside. After the Supreme Court decision of 1998, he is returned to prison in 1993 after the Arizona Supreme Court reinstated his conviction. He was released on parole in 1998 but re-incarcerated in the following year for failing to register his address as required by the Arizona Sex Offender Laws. After further DNA testing he was released from prison in August 2000. In 2002 the real culprit was convicted and sentenced to twenty-four years in prison.

In other words, the entirely innocent Youngblood served nine years of a ten year and six month sentence before his innocence was established. It is an appalling thought that an innocent man served almost a decade in a convict prison in Arizona because the Supreme Court, by a five/four majority, required bad faith before it would intervene on the basis of missing evidence. One shudders to think of the prison conditions and experiences of a man held in an Arizona prison after conviction for sodomising a ten year old child.

APPENDIX III

A current case.

The drastic nature of the sanctions which may be imposed in a case of non-disclosure is illustrated by an immediately current case in the State of Texas.

In 1987 a man called Michael Morton was jailed for the murder of his wife and spent the entire of the following twenty-five years in prison, from ages thirty-six to sixty-one.

Morton was prosecuted by the former Williamson County District Attorney, Ken Anderson. Anderson subsequently became a State judge and served in that capacity in Brownsville, Texas, until September, 2012.

Morton was freed in October 2011 when it transpired that Anderson, in his capacity as a prosecutor, had suppressed two statements tending to suggest a perpetrator other than Morton. Fresh DNA evidence was also deployed to attribute the crime to another person, as was done in **Youngblood**, above.

Morton was freed in October 2011, on which occasion another Texas Judge, Judge Kelly Moore who ordered his release, told him that "The world is a better place because of you".

The case is now current because former Judge Anderson, who had already been forced to resign, was disbarred and jailed for contempt of court for his suppression of the statements. See "*Texas Prosecutor Ken Anderson jailed for convicting innocent Michael Morton*" (The Independent, Friday 22nd November, 2013.

The aforementioned sanctions were apparently imposed by agreement, in the nature of a plea bargain, but are without prejudice to Anderson's right to appeal on the grounds that the proceedings violate Texas Statute of Limitations. He was to present himself to prison on Monday 2nd December, 2013 but this has now been stayed.

A more legally complete account of the case just discussed can be found in the ABA (American Bar Association) Journal for April 22nd 2013, which is easily available on line.

This article quotes the "unusual Court of Inquiry" appointed to investigate the case as saying:

> "*This Court cannot think of a more intentionally harmful act that a prosecutor's conscious choice to hide mitigating evidence so as to create an uneven playing field for a defendant facing a murder charge and a life sentence*".

The American Bar Association Journal adds that the ruling:

> "*… represents the first step towards a potential prosecution of Anderson, who had been a State Court Judge.*"

The Journal summarises the essence of the factual findings of the Court of Inquiry:

> "*Anderson concealed two critical items of evidence that could have helped Morton avoid conviction at trial. First, a police interview transcript showed that Morton's young son had witnessed the murder and said his father wasn't home when it occurred. Second, a man had parked a green van near the Morton home and several times walked into a wooded area behind the house.*"

As in the Arizona case cited above, in this case the new evidence permitted the conviction of the true perpetrator of the crime.

American conditions are different to those prevailing here and the jurisprudence can differ very markedly. A strong feature of the American landscape, however, is the presence of express statutory obligations to preserve evidence that might give rise to useful DNA analysis. Another is the fact that enhanced potential for DNA analysis, pursued in many cases by the Innocence Project, has shown that all too often convictions were

had, in comparatively recent times, based on flawed eye witness evidence, invented confessions, and the like, which but for developments in forensic science would never have been exposed as such.