

Misconceptions About Fire Investigations

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Part IV / Circumstantial vs. Direct Evidence

It is often said that arson is the only crime which you must prove was not committed by God. In many cases, the investigator must not only prove what happened, he must also prove what did not happen. For example, he must prove that lightning did not strike the structure and start the fire.

Fire investigators fight many misconceptions about how fires start, ranging from “rats running around in the attic or basement with matches in their mouths” to “spontaneous ignition,” not to mention some of the more common misconceptions, such as immediate fires from cigarette ignition, electrical fire causes and a host of other phenomena often blamed but infrequently occurring.

Arson for profit, like burglary, is usually premeditated. It is a crime of stealth, where the actors avoid, if possible, being seen committing the crime. In very few cases is the arsonist seen or caught “striking the match.” In fact, the match is often destroyed in the fire along with other evidence.



Fire Investigators rely almost totally upon circumstantial evidence. The photograph of the liquid accelerant trail above is circumstantial evidence that infers a certain fact.

Because of this, fire investigators are taught from the beginning of their training to look for and use circumstantial evidence since it is often the only evidence available to them. Circumstantial evidence infers the existence of principal facts from circumstances. It is not based on actual personal knowledge or observation of facts in controversy, but on other facts from which deductions are drawn. For example, if we saw Jack and John go into a closet, heard a gun shot, saw John come out with a smoking gun, then discovered Jack in the closet with a bullet hole in his back, we could not testify that we saw John shoot Jack. We could only state what circumstances we witnessed, and those circumstances would infer a certain fact.

The low conviction rate of arsonists is often blamed upon District Attorneys' failure to understand and fully appreciate the value of circumstantial evidence. As a result, the fire investigation profession has often taken it upon itself to educate attorneys to the value of circumstantial evidence.

District Attorneys generally prefer direct evidence. Direct evidence, if believed, proves existence of a fact in issue without reference or presumption. For example, a confession or a testimony from an eyewitness to a crime would be direct evidence. For years, fire investigators have been plagued by the “match in hand syndrome” from both District Attorneys and insurance defense attorneys.

Is it possible, however, that fire investigators are just as biased in favor of circumstantial evidence as District Attorneys are biased in favor of direct evidence? I have taught at several Fire Investigation Schools at which I offered the following scenario:

As an investigator you have been given the assignment to conduct an investigation into a fire. Upon arrival at the fire scene, however, you find all combustibles have been completely consumed. You are unable to tell from your examination where the fire started or what the cause of the fire was.

As you start to “fold your tent” you see a lady across the street sitting on the front porch of a house. When speaking with the lady you determine that she is of sound mind, and she related to you the following story: “Yesterday, the owner of the house that burned last night removed all of the furniture from his house. He came back later, and I saw him take a gasoline can and pour gasoline all through the house. Then he lit a road flare and threw it through the door and the house burst into flames all over.”



· Samples were obtained from the edge of this liquid accelerant trailer. Testimony from the laboratory technician was offered as corroborating evidence to assist in establishing the *Corpus Delicti* of arson.

Many fire investigators have told me that based upon the evidence in that story, they would be unable to determine the cause of the fire. District Attorneys, on the other hand, on hearing this story recognize the eyewitness’ report as very strong direct evidence of arson and would not hesitate to take the case to Court. We, as fire investigators, have become so technically oriented and so well trained in the collection of circumstantial evidence that we often do not even recognize direct evidence when it is presented to us. We are as guilty in our own way as some District Attorneys are in theirs.

It is a serious error and misconception to base one’s opinion as to the origin and cause of the fire only upon evidence found at a fire scene. Direct evidence may be found sitting right across the street on a front porch. A fire scene that may seem sterile upon first inspection may be transformed by one eyewitness into a solid Court case.

Even if direct evidence is not found, the investigator must not forget that circumstantial evidence may be found down the street also. Circumstantial evidence may be located in a mini storage facility, in testimony from a gas attendant or milkman, or may even be found at the local weather station in the form of a weather report eliminating the possibility of an "Act of God."